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United Nations Development Programme

Country: Angola
PROJECT DOCUMENT¹

Project Title: Addressing urgent coastal adaptation needs and capacity gaps in Angola

UNDAF Outcome(s): No. 4: By 2019, the environmental sustainability is strengthened through the improvement of management of energy, natural resources, access to green technology, climate change strategies, conservation of biodiversity, and systems and plans to reduce disasters and risks.

UNDP Strategic Plan Environment and Sustainable Development Primary Outcome: SP 2014-2017 #5: Countries are able to reduce the likelihood of conflict, and lower the risk of natural disasters, including from climate change.

UNDP Strategic Plan Secondary Outcome:

Expected CP Outcome(s):

By 2019, the environmental sustainability is strengthened through the improvement of management of energy, natural resources, access to green technology, climate change strategies, conservation of biodiversity, and systems and plans to reduce disasters and risks.

Expected CPAP Output (s)

CPAPC 2015-2019: Priority Area 4: Environmental sustainability for disaster risk reduction and economic advancement.

Executing Entity/Implementing Partner: Ministry of Environment (MINAMB)

Implementing Entity/Responsible Partners: UNEP and UNDP

Brief Description

Angola's coastline is home to over 50% of the country's population, where the combination of rapid population growth and inadequate urban planning has resulted in diverse socio-economic and environmental challenges. Such challenges include inadequate access to water and electricity, poor sanitation, and exposure to natural disasters such as flooding. Approximately two thirds of coastal Angolan communities are reliant on livelihoods such as agriculture and fishing for subsistence and employment. The livelihoods of these communities are therefore underpinned by the goods and services generated by functional, intact ecosystems. Despite this important contribution of Angola's ecosystems to household income and national GDP, inappropriate management practices and sustained overexploitation has resulted in the widespread degradation of Angola's coastal ecosystems. Impoverished households that are reliant on natural resource-based livelihoods are

¹ For UNDP supported GEF funded projects as this includes GEF-specific requirements

consequently becoming increasingly vulnerable to the negative effects of ecosystem degradation.

The threats to the livelihoods and wellbeing of coastal communities will be further exacerbated by the current and future effects of climate change. These effects include: i) increased variability in rainfall and temperature; ii) increased frequency and severity of droughts and floods; and iii) rising sea-level and increased frequency of storm surges, which results in increased beach erosion. Consequently, climate change will result in multiple negative effects on the livelihoods and health of coastal households in Angola. For example, coastal infrastructure and households will be damaged by increased frequency and severity of floods, storm surges and beach erosion. Additionally, increases in temperature and flooding events will increase the incidence of water- and vector-borne diseases of both humans and livestock. Agricultural production will decrease as a result of drought, thereby exacerbating food insecurity amongst local communities in these coastal regions. Several economically important sectors – including fisheries, agriculture, water, energy and tourism – are also vulnerable to the negative effects of climate change.

To address these urgent adaptation needs, the proposed project will use Least Developed Country Fund (LDCF) investments to increase the capacity of Angola's government and coastal communities to adapt to climate change. In particular, the project will promote and demonstrate cost-effective, low-regret options for adaptation including: i) climate-resilient practices such as Ecosystem based adaptation (EbA) and climate-resilient land management (including promotion of agricultural, waste management and sustainable harvesting practices promote ecosystem health and sustainable livelihoods under climate change), and ii) establishment of a pilot Early Warning System (EWS). The benefits of these approaches to climate change adaptation will be demonstrated to impoverished rural communities in coastal areas as well as stakeholders from important economic sectors such as fisheries, agriculture, transport, energy, water and tourism. The objectives of the proposed project will be achieved through multiple complementary measures that will include: i) increasing scientific and technical capacity of government staff to deliver early warning information to coastal communities in Cabinda, Kwanza Sul, Bengo and Namibe Provinces; ii) demonstrating EbA and climate-resilient land-management practices in participation with coastal communities; and iii) mainstreaming climate change adaptation into local to national governance.

To promote sustainability and upscaling of the project's activities beyond the intervention sites and implementation period, the project will develop briefs and technical guidelines on adaptation interventions – including EbA and climate-resilient land management – to be developed for distribution to policy- and decision-makers. Moreover, the project will provide recommendations to integrated best-practice options for adaptation into relevant sectoral strategies and budgets, such as the Master Plan for Tourism, and the Artisanal Fisheries Development Plan 2014–2017. In addition, the project will develop EbA project concept notes for presentation to stakeholders in the private sector – including the diamond and petroleum industry – to outline potential opportunities for Corporate Social Investment (CSI) programmes to support EbA-related activities along the coast of Angola. These EbA project concept notes will be packed for different investment amounts and will include: i) details on the vulnerability of the target sector to climate change ii) the economic rationale for investing in EbA; and iii) quantification of the social and environmental benefits of the investment.

LDCF resources will build on several on-going selected baseline projects, which include: i) INAMET Strategic Development Master Plan (SDMP) (2012–2018); ii) the FSSP (2012–2017); and iii) Angola Water Sector Institutional Project (PDISA) (2010–2019). The project

will be executed by Ministry of Environment (MINAMB) of Angola. Components 1 and 2 will be implemented with support from the United Nations Environment Programme (UNEP). Component 3 will be implemented with support from the United Nations Development Programme (UNDP).

Programme Period: 2016 – 2019	Total resources required: US\$ 18,491,467
Atlas Award ID: 00084491	Total allocated resources:
Project ID: 00092471	<ul style="list-style-type: none"> o GEF: US\$ 6,180,000 <ul style="list-style-type: none"> o UNDP - \$ 1,000,000 o UNEP – \$ 5,180,000 o Co- financing: US\$ 12,311,467 <ul style="list-style-type: none"> o GOA – \$ 6,161,467 o AFDB - \$ 3,000,000 o IDASADC \$ 3,000,000 o UNEP - \$150,000
PIMS #: 5276	
Start date: January 2016	
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Management Arrangements: NIM	
PAC Meeting Date: (TBC)	

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List of Acronyms²

AAKNET	African Adaptation Knowledge Network
AfDB	African Development Bank
<i>CIBAC</i>	Inter-ministerial Commission for Climate Change and Biodiversity
<i>CNPCB</i>	Civil Protection Services and Fire Brigade
COSPE	Cooperation for the Development of Emerging Countries
CSI	Corporate Social Investment
<i>DNAAS</i>	National Directorate for Water Supply and Sanitation
EbA	Ecosystem-based Adaptation
EIA	Environmental Impact Assessment
<i>EDLP</i>	Long Term Development Strategy
EWS	Early Warning System
FAO	Food and Agriculture Organisation of the United Nations
FAS	Local Development Project
FM	Financial Manager
<i>FSSP</i>	Support to the Fisheries Sector Project
<i>GAC</i>	Climate Change Cabinet
GDP	Gross Domestic Product
GEF	Global Environment Facility
GoA	Government of Angola
<i>INAMET</i>	National Institute of Meteorology
<i>INIP</i>	National Institute for Fisheries Research
<i>INRH</i>	National Institute for Water Resources
LDCF	Least Developed Country
LDCF	Least Developed Country Fund
<i>MINAGRI</i>	Ministry of Agriculture and Rural Development
<i>MINAMB</i>	Ministry of the Environment
<i>MINEA</i>	Ministry of Energy and Water
<i>MINTRANS</i>	Ministry of Transport
<i>MININT</i>	Ministry of the Interior
<i>MINPET</i>	Ministry of Petroleum
<i>MINPES</i>	Ministry of Fisheries
MLS	Monitoring and Learning Specialist
<i>MTIT</i>	Ministry of Telecommunications and Information Technologies
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
PA	Project Administrative Assistant
<i>PASA</i>	Environmental Sector Support Project
PMU	Project Management Unit
<i>PNFFSAC</i>	National Policy on Forestry, Fauna and Areas of Conservation
<i>PDISA</i>	Angola Water Sector Institutional Project
SDMP	INAMET's Strategic Development Master Plan
SLM	Sustainable Land Management
<i>SNPC</i>	National Civil Protection System
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

² All acronyms in italics refer to the Portuguese

List of Annexes

- Annex 1: Risk analysis
- Annex 2: Key assessment reports
- Annex 3: Terms of Reference for project personnel
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- Annex 5: Social and Environmental Screening Template
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- Annex 7: Tracking Tool for Climate Change Adaptation Projects
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1. Situation analysis

1. The Republic of Angola (hereafter Angola) has a population of ~21 million people, with more than half of the population living along the coast. There are high rates of unemployment, financial disparity and poverty in the country³. This disparity is largely a consequence of a prolonged civil war⁴ over the period 1975 to 2002. Moreover, as a result of limited financial resources and infrastructure, most of the population has limited access to *inter alia*: i) food; ii) safe drinking water; iii) sanitation; iv) education; v) healthcare; and vi) electricity. The growing population density along the coast of Angola – coupled with poor urban planning and governance – has resulted in a wide range of social and environmental problems. In particular, poor governance of Angola's environmental sector has led to the overexploitation of natural resources. For example, construction of infrastructure in environmentally sensitive coastal land and lack of enforcement of Environmental Impact Assessments (EIA) requirements has resulted in the degradation of productive coastal ecosystems, such as mangroves.

1.1. Climate change - induced problem

2. Under the current and predicted effects of climate change – including *inter alia* sea level rise and increases in the frequency and severity of both flood and drought events – it is likely that the poor living conditions of coastal communities will be further exacerbated⁵. For example, increased frequency and severity of floods will increase the risk of damage to coastal infrastructure and housing, with implications for human health. Additionally, increased frequency and intensity of drought events are likely to affect agricultural yields negatively, thereby compounding food insecurity in the coastal region. In particular, the projected increase in the temperature of the Benguela Current – which has direct influences on the climate of Angola – will have implications for commercial and artisanal fisheries along the coast. Coastal ecosystems will also be negatively affected by climate-related changes to river flows, hydrology and water temperature. These changes will have a negative impact on fisheries and agricultural sectors. In summary, observed and predicted climate changes are likely to exacerbate the vulnerability of local communities in coastal areas of Angola⁶. The problem that the project seeks to address is that national and local government and coastal communities have limited technical and institutional capacity to adapt to these negative effects of climate change. This is because of: i) insufficient scientific and technical capacity for planning adaptation in coastal zone areas; ii) limited demonstration of, and availability of technical capacity to implement, sustainable coastal adaptation interventions; and iii) poor institutional coordination and capacity for adaptation to climate change. Additional information on the climate, ecology, geography, and the political and socio-economic context of Angola – relevant to LDCF resources – is presented below.

1.2. Underlying causes

3. The underlying causes of vulnerability in Angola, as well as their threats, are described below.

Non-climate change causes of vulnerability

Threats to human welfare

³ Angola: FAO Country Profile. <http://www.fao.org/countryprofiles/index/en/?iso3=AGO> Accessed 14 January 2015.

⁴ War of independence followed by a civil war.

⁵ UNDP. Angola: Climate Change Country Profile

⁶ Angola: National Adaptation Programme of Action under the UNFCCC (2011).

The primary threats to human welfare in Angola are described below.

- *Inadequate planning of housing and infrastructure:* Poorly coordinated development planning and regulation has resulted in development of infrastructure and housing in inappropriate coastal areas, resulting in damage and loss of life as a result of climate-related hazards such as flooding and landslides. For example, many internally displaced persons and poor families have settled in areas where the inadequate infrastructure has placed them at an increased risk of flooding. Furthermore, people who have settled and are living in low-lying coastal areas, river basins or areas adjacent to eroded slopes are vulnerable to floods and landslides (for example, in March 2015, flooding resulted in over 60 deaths in the coastal settlement of Lobito in the Benguela Province⁷). Additionally, insufficient access to basic sanitation in both urban and rural areas results in frequent incidents of waterborne diseases, especially among children⁸. This health risk is exacerbated by overcrowding, inadequate wastewater drainage and inadequate access to public services such as water and electrification.
- *Fresh water:* The quality of fresh water in Luanda and other major Angolan cities is decreasing as a result of pollution and contamination with solid and liquid waste⁹. This can be attributed to factors including *inter alia* inadequate sewage and waste disposal facilities and overcrowding. Other water resource problems include inadequate supply of fresh water to households, especially in rural areas.
- *Health:* Overall, the quality and availability of healthcare in Angola is limited. For example, although HIV/AIDS is a widespread health challenge, there is an inadequate supply of antiretroviral drugs (ARVs) to meet demands. In some Angolan coastal zone villages, health care facilities are poorly equipped and medical expertise is scarce¹⁰ (See Annex 2 Longa site report). The limited access to healthcare is particularly problematic due to the widespread incidence of water- and vector-borne diseases such as cholera, typhoid and malaria, which are endemic in Luanda and other coastal cities as a result of poor sanitation and water drainage.
- *Food insecurity:* Angola is partially reliant on importation of fresh and processed food. In some cases, local production is more expensive than importing food because of difficulties in internal transportation and the high prices of commercial agricultural inputs. Additionally, the amount of food produced locally is not sufficient to meet the needs of the domestic market. Consequently, food prices are very high relative to average income – for example a 500 g loaf of fresh white bread in Luanda costs ~US\$1.75 while over ~50% of the population subsists on US\$1.25 per day¹¹. The majority of the rural population (85%) is dependent on subsistence agriculture and fishing¹². Consequently households in rural areas are particularly vulnerable to climate-related hazards such as droughts, floods and increased temperature, as well as other hazards which degrade natural resources such as oil spills.

Threats to natural resources

- *Land and vegetation:* During the prolonged period of civil war, forests and woodlands were cleared to provide woodfuel and building material for displaced individuals¹³. Forests continue to be degraded by extensive extraction of timber and woodfuel (including firewood and charcoal). The reliance of households on woodfuel as a source of domestic energy and on charcoal production as an income generating activity contributes to ecosystem

⁷ Development Workshop, email communication, 13 March 2015.

⁸ Development Workshop (2012), GEF Proposal: Climate change, flooding and water supply in Angola's growing coastal cities.

⁹ http://pdf.usaid.gov/pdf_docs/PNADO925.pdf Accessed 17 March 2015.

¹⁰ <http://dhsprogram.com/pubs/pdf/MIS11/MIS11.pdf> 05 December 2014.

¹¹ Jover, E., Lopes Pintos, A., and Marchand, A. (2012). Angola: Private Sector Country Profile: September 2012.

¹² Angola NAPA 2011.

¹³ <http://wrm.org.uy/oldsite/bulletin/28/Angola.html> 09 December 2014.

degradation in wooded areas on a localised scale, particularly in proximity to residential areas and cities. It is likely that the consumption of biomass will increase over time, resulting in further deforestation, land degradation and reductions in biodiversity.

- Mangrove forests in Angola are also being cleared by the local population to meet demand for woodfuel and building material¹⁴ and for tourism-related infrastructure. The degradation of mangroves is further exacerbated by gas and oil exploration activities in Angola. The removal of mangrove forests has resulted in a decrease of once-abundant fish, crab and shrimp species, which are a source of food and income for coastal communities.
- *Marine life:* Marine and coastal biodiversity is threatened by overfishing and unsustainable fishing methods. Other threats include *inter alia*: i) destruction of marine habitat through rapid and poorly planned development along the coast; ii) industrial pollution and oil spills; iii) lack of marine conservation areas; and iv) the introduction of alien species¹⁵. Consequently there are negative implications for the fishing industry and for the livelihoods and food security of coastal communities.

1.3. Long-term solution and barriers to achieving the solution

4. The preferred solution to the problem is to enhance national and community-level capacity to adapt to climate change along the coast of Angola by: i) building institutional, scientific and technical capacity to analyse climate change risks and to plan coastal adaptation interventions; and ii) demonstrating innovative approaches to climate change adaptation in coastal areas. This will include measures such as EbA, climate-resilient land management and EWS, economic analysis of adaptation options and mainstreaming of adaptation into national policies and plans.

Barriers to implementing the preferred solution

5. There are several barriers to achieving the preferred solution in Angola. By addressing the barriers to implementing these responses, LDCF resources will contribute to the achievement of the preferred solution.

Inadequate scientific data, historical climate information and monitoring networks/stations

6. There is little reliable climatic data for the whole of Angola from 1975 until the end of the civil war in 2002. This hampers the production of accurate national climate change scenarios¹⁶ and subsequent adaptation planning in the country. During the civil war many of the meteorological stations built under colonial rule were destroyed¹⁷ and the Government of Angola's (GoA) ability to operate and maintain the hydrometeorological network was severely constrained. It was only after the end of the civil war in 2002 that a consistent – though gradual – programme for improved collection of climate and weather data was established. The National Institute of Meteorology (INAMET) currently has an expansion programme in place to improve meteorological monitoring infrastructure in Angola in order to provide related public service products, such as agricultural forecasts and early flood and drought warnings. However, this expansion programme is progressing slowly. The Angolan National Adaptation Programme of Action (NAPA) emphasises that the early warning information currently available through government agencies such as INAMET and the Civil Protection Services and Fire Brigade (CNPCB) is insufficient. Additionally, available information is not being communicated effectively to end-users¹⁸. Coastal communities have not yet received training on how to respond to early

¹⁴ http://www.unep.org/regionalseas/publications/otherpubs/pdfs/Mangroves_of_Western_and_Central_Africa.pdf

¹⁵ <http://www.cbd.int/countries/profile/default.shtml?country=ao> 09 December 2014.

¹⁶ UNFCCC. (2011). Angola: National Adaptation Programme of Action. See: <http://unfccc.int/resource/docs/napa/ago01.pdf> Accessed 20 October 2014.

¹⁷ After 1975¹⁷ the number of meteorological stations dropped from almost 500 to 20.

warning information. This acts as a barrier to the comprehensive and effective use of EWS in Angola and limits appropriate responses to climate change.

Limited technical and scientific capacity to address climate change

7. Although climate change is recognised as an issue of national importance within the NAPA, there is currently insufficient technical and scientific understanding of climate change and climate change adaptation within the GoA. For example, the vulnerability of communities living in different areas along the Angolan coast to the effects of current and future climate change is currently not understood. In addition, there are too few individuals with the appropriate skills for translating climate change adaptation strategies into actions at a local level. For example, in Barra do Dande, local government representatives require training on *inter alia*: i) interpretation of climate information provided to them by CNPCB and provincial bodies; and ii) prompt and accurate transmission of these warnings to local populations.

Limited inter-ministerial coordination with regards to planning for climate change adaptation

8. An effective national response to climate change requires coordination between relevant national ministries, including *inter alia*: i) the Ministries of Environment, Water and Energy; ii) the Ministry of Agriculture and Rural Development (MINAGRI); iii) the Ministry of Telecommunication and Information Technologies (MTIT) (including INAMET); and iii) the Ministry of the Interior (MININT) (including CNPCB). Historically there has been limited coordination between government departments, scientific institutions and projects involved in climate change adaptation in Angola. To address this gap, the Inter-ministerial Commission for Biodiversity and Climate Change (CIBAC) was established in 2012 by Presidential Decree. CIBAC is attended by ministers and their technical advisors and therefore has a high degree of political influence and potential for technical knowledge about climate change. However, the Secretariat of CIBAC is under-capacitated with regards to administration of the commission. Consequently, CIBAC meets irregularly and relevant climate change topics are not included on the agenda. Effective inter-ministerial coordination regarding planning for climate change adaptation is therefore currently curtailed.

Limited understanding of climate change risks to coastal sectors.

9. Currently there is a limited understanding within CIBAC member ministries – including *inter alia* the Ministry of Environment (MINAMB), the MINAGRI, Ministry of Fisheries (MINPES) and the Ministry of Interior (MININT) – of the climate risks faced by important economic sectors in coastal areas. Additionally, there are no sector-specific guidelines for adaptation which would enable cost-effective interventions to be effectively planned and executed. Consequently, adaptation to climate change is not appropriately integrated into the strategies, plans and related budgets of ministries associated with coastal sectors. Moreover, the economic rationale for climate change adaptation at a sectoral level has not been properly articulated in Angola. Specifically, the cost effectiveness of adaptation versus other actions is not understood. Without this information there is reduced motivation for climate-vulnerable sectors to implement adaptation interventions and include climate change adaptation in their annual operating budgets.

Limited knowledge of the value of ecosystems, EbA interventions and climate change

10. There is a limited understanding and awareness of the role of ecosystems in reducing the negative effects of climate change, both at the level of rural households as well as within government institutions such as MINAMB and MINPES. Ecosystem degradation resulting from commercialisation of sensitive coastal land or unsustainable resource use by coastal

communities is partly a result of limited knowledge of the benefits of maintaining functional ecosystems. For example, it is likely that fishing communities are currently unaware that the decline in fish stocks can be partly attributed to the degradation of local ecosystems, including the mangrove wetlands and estuaries which are important breeding grounds for commercially valuable fish species. Consequently, the limited knowledge of EbA is a barrier to effective planning and implementation of adaptation activities in coastal areas.

Lack of demonstration/proof of concept of EbA interventions and related protocols/tools.

11. Currently, there are no EbA projects being implemented in Angola. As a result, the benefits and cost-effectiveness of EbA interventions have not been sufficiently demonstrated to policy- and decision-makers and coastal communities. Without sufficient demonstration it is unlikely that: i) an EbA approach will be integrated into local, regional and national policies, plans and legislation for coastal areas; or that ii) coastal communities will support and contribute to EbA projects. To enhance adaptation to climate change and promote the development of additional livelihoods, EbA will need to be tailored to particular ecosystems. However, technical protocols for EbA in ecosystems along the coast – including coastal forests, mangroves and wetlands – have not yet been produced. This is mostly because there is currently limited integration of climate change science into ecosystem restoration plans. Therefore, institutions and ministries engaging in ecosystem restoration – such as the Institute of Forestry development under MIANGRI – have limited access to nationally-appropriate tools or documents to guide them to implement EbA.

12. No single initiative can completely remove all of the aforementioned barriers. However, LDCF resources will work in coordination with other adaptation and forest-related initiatives to build on their advances in overcoming these barriers. In particular, LDCF resources will: i) enhance the capacity of the GoA to collect climatic and hydrological information, produce early warnings and improve the ability of coastal communities to respond to early warnings; ii) improve coordination between government institutions involved in climate change adaptation through forums such as CIBAC; iii) increase the technical capacity of the CIBAC to understand the cost-effectiveness of various adaptation options relative to a business as usual scenario; iv) improve awareness and understanding of EbA and climate change at national and local levels; v) develop guidelines/tools for adaptation in coastal sectors that are vulnerable to climate change; and vi) demonstrate the benefits and cost effectiveness of EbA interventions in pilot areas with view to upscaling across Angola.

2. Strategy

2.1.1. Project rationale and policy conformity

13. LDCF resources will increase the resilience of vulnerable coastal communities and economic sectors in Angola to the observed and predicted effects of climate change. This will be achieved through multiple cost-effective and complementary measures that will include: i) increasing scientific and technical capacity of provincial and local-level government staff to deliver early warning information to residents of Barra do Dande; ii) demonstrating EbA and climate-resilient land management practices in participation with coastal communities; and iii) supporting the mainstreaming of climate change adaptation at inter-ministerial, policy and sectoral levels.

14. The practices promoted and demonstrated by the project (including *inter alia* EWS, EbA and climate-resilient land management) will be supported by the increased availability of data and information to guide the development of locally appropriate adaptation actions. This will include the generation of a national-level map of updated climate change vulnerabilities and

hazards that will assist in the identification of sites and activities to be prioritised for adaptation-related initiatives. The increased availability and quality of information on sub-national climate change hazards and vulnerabilities will benefit important economic sectors and livelihood practices (notably including agriculture, forestry fisheries, livestock husbandry and water), thereby safeguarding previous and ongoing investments in Angola's socio-economic development. The project will support improved decision-making related to climate-smart development planning by providing investments and technical assistance to the national hydrometeorological agency INAMET, thereby increasing the availability of real-time and spatially explicit climate and weather data. The increased infrastructural and technical capacity within INAMET will support the generation climate and weather data to inform the timely issuing of early warnings for site-specific climate hazards from national agencies such as CNPCB.

15. In the long-term, the investments of LDCF resources will generate sustained benefits for coastal communities and vulnerable economic sectors beyond the lifespan of the project. For instance, the project will support the development of standard operating procedures and community response plans for Barra do Dande thereby supporting a long-term system to issue early warnings for this settlement beyond the project implementation period.. Lessons learned from EbA and climate-resilient land management interventions in Component 2 will be shared through regional networks such as Africa Adaptation Knowledge Network (AAKNET) and an e-library to be published on the MINAMB website. Additionally, the enhanced capacity of the CIBAC (Output 3.1) for the mainstreaming of adaptation into sectoral budgets and plans into the future will support medium- and long-term adaptation to climate change at a national level.

Policy conformity

16. LDCF resources are aligned with Angola's policies and strategies on development and environmental management. These are communicated in the following documents: i) Angola 2025: Long Term Development Strategy (EDLP); ii) National Environmental Management Programme; iii) Angola's Initial National Communication to the United Nations Framework Convention On Climate Change (UNFCCC); iv) the National Development Plan 2013–2017; and v) the NAPA. See Section 2.2.1 for additional details.

LDCF conformity

17. As Angola is a non-Annex I party to the UNFCCC and has already submitted the NAPA to the UNFCCC Secretariat, the project meets the LDCF's eligibility criteria. Furthermore, the project conforms to the strategic objectives of the LDCF, as described below.

18. *Participatory approach:* the project's activities and proposed intervention sites were selected through extensive stakeholder consultations at both local and national levels. Please see Section 2.1.3 for a full breakdown of stakeholders consulted during the PPG process.

19. *Implementing NAPA Priorities:* The LDCF supports the implementation of the NAPA. LDCF resources have therefore been developed in alignment with priority activities outlined in Angola's NAPA (2006), including the following NAPA priorities:

- Priority 2: Promote sustainable land management (SLM) for increased agricultural yields – the project will train coastal communities and extension services on climate-resilient land management methodologies.
- Priority 6: Revise sectoral laws for proactive adaptation – the project will propose recommendations for revisions to relevant national laws, sectoral plans and associated budgets to mainstream adaptation.

- Priority 7: Create an EWS for flooding and storms – the project will be supporting the development of a functional EWS in Barra do Dande, working with INAMET and CNPCB.
- Priority 8: National institutional mechanism for adaptation planning and mainstreaming – the project will strengthen the coordination mechanism of CIBAC to encourage effective planning of adaptation interventions in coastal areas of Angola.

20. *Learning-by-doing approach:* LDCF resources will demonstrate innovative EWS, climate-resilient land management interventions and EbA techniques to strengthen coastal communities' resilience to climate change. The lessons learned at the national and international level will be documented and disseminated to inform national and sub-national development plans in Angola (Output 4.1), providing future projects with lessons learned from LDCF project interventions.

21. *Multi-disciplinary approach:* The interventions of the LDCF project require expertise from multiple sectors, including water, agriculture and disaster risk management. Consequently, the development of appropriate interventions in coastal communities will be undertaken under the guidance of technical experts from all of these sectors, including through multi-sectoral committees such as CIBAC. In addition, the interventions demonstrated by the project will have a cross-sectoral approach that will include methodologies and techniques from fields related to ecosystem restoration and climate-resilient land management.

22. *Gender equality:* In Angola, the adaptive capacity of both men and women is compromised by challenges such as to: i) limited access to weather and climate forecasting information; ii) limited access to natural resources such as water; and iii) limited participation in social networks that provide resources or technical support to adapt to the observed and predicted effects of climate change. However, Angolan women are considered to be particularly sensitive to the effects of climate change because they tend to be responsible for domestic responsibilities such as cooking and collection of fuel and water for household use. Additionally, women in artisanal fishing communities are responsible for selling the fish that are caught by community members. Consequently, the livelihoods of these women are directly linked to the health of fish stocks, which are predicted to be negatively affected by alterations in Benguela Current. Currently, most women in rural parts of Angola have insufficient access to relevant information and skills to manage the negative effects of climate change on food, fuel and water security. A reduction in access to these resources therefore has detrimental implications for women and families in terms of i) overall health; ii) nutrition; and iii) livelihood income.

23. LDCF resources will address the vulnerability and low adaptive capacity of women to climate change by mainstreaming gender considerations into the design and implementation of EbA activities. For example, the project will work directly with fishing cooperatives and associations, several of which are focussed on the sale of fish and therefore have almost exclusively female membership. To integrate gender into relevant activities, within Component 1 LDCF resources will allow collaboration with the Ministry of Family and Women Promotion. Under Component 2, gender specific indicators and targets will be developed to monitor the progress of gender mainstreaming into EbA activities and the development of alternative livelihoods. Under all Components, gender sensitivity will be incorporated into trainings so that female participants are empowered to participate fully in the training sessions and related EbA activities. Trainers will be required to have the skills and experience necessary to plan and facilitate gender-sensitive training.

24. *Complementary approach:* LDCF resources will be used in conjunction with relevant ongoing and adaptation projects in Angola (Section 2.2.2 and Annex 9). It will build on the

activities of the identified baseline projects, climate-proofing their interventions to promote the achievement of their objectives. The project will also coordinate with other ecosystem management projects to share valuable lessons and prevent duplication of efforts. In addition, training will be conducted on innovative adaptation funding to promote climate change adaptation in Angola (Output 3.1).

2.1.2. Country ownership: country eligibility and country drivenness

25. As a Least Developed Country (LDC), Angola has limited resources to effectively lower the risks that climate change poses to hard-won development gains. However, the Government is making efforts to address climate change. Angola is committed to ensuring that the poorest and most vulnerable communities are supported by programmes that enhance their long-term adaptive capacity. Angola ratified the UNFCCC¹⁹, thereby committing to the adoption of policies and implementation of measures to adapt to climate change. Consequently, a number of activities have been undertaken (detailed below), which LDCF resources will build upon and complement.

26. Angola submitted its Initial National Communication (INC) to the UNFCCC in 2012. LDCF resources are aligned with the adaptation measures recommended in the INC, including the National Capacity Self-Assessment (NCSA) and the Technology Needs Assessment (TNA).

27. The design of this project is based on information received from a range of stakeholder consultations conducted in Angola (see Stakeholder Baseline Analysis below). The participatory approach affirms that the project reflects the needs of national stakeholders and there is country ownership of the project. In addition, the proposed LDCF project is linked to priorities reflected in the UN Development Assistance Framework (UNDAF, 2015–2019). In particular, the project relates to UNDAF Outcome 4, which will develop institutional capacities to effectively sustain, manage and protect livelihoods from the risks of climate change, disasters and environmental degradation.

28. LDCF resources will be made use of in alignment with the UNDP Angola Country Programme Action Plan (CPAP 2015-2019). In particular, the project supports CPAP Priority Area 4: environmental sustainability for disaster risk reduction and economic advancement. The fourth priority area responds to the national outcomes related to strengthening legal and regulatory frameworks and institutions to ensure the conservation, sustainable use, access to and benefit-sharing of environmental resources. UNDP environmental interventions represent a growing portfolio that will strengthen national capacities to mainstream climate into national policies and strategies as well as to effectively implement international commitments and bring vulnerable groups into the centre of the national sustainable development agenda. This will include support to national efforts for disaster risk reduction (DRR) and building resilience for vulnerable people living in areas threatened by climate change and environmental disasters. Accordingly, LDCF resources will focus on strengthening institutions and communities for contingency planning and implementation, information management, and internal coordination. Additionally, support for innovative alternative livelihood options to diversify risks will be promoted.

2.1.3. Stakeholder mapping and analysis

29. The activities to be financed by LDCF resources have been developed through extensive consultations with national and multilateral stakeholders (see Annex 2 for further details on the inception mission, workshop and stakeholder consultations). As a result, the

¹⁹ On 28 May 1993.

project has been designed to address the priority adaptation needs identified by these stakeholders. This participatory approach to stakeholder engagement has promoted ownership of the project by coastal communities and the national government. Consultations included: i) the inception workshop in January 2015; ii) meetings with international, national and local level stakeholders in November 2014 January and at the validation workshop in April 2015; and iii) remote consultations with national and multilateral stakeholders between October 2014 and May 2015. The purpose of the stakeholder consultations was to identify: i) appropriate EbA and climate change adaptation interventions, based on the vulnerabilities and needs of coastal communities; ii) on-going projects relevant to the activities to be financed by LDCF resources; iii) national and local government authorities who will be involved in the activities of the project; iv) relevant national policies and legislation with which the project is aligned; and v) additional information on the baseline context in Angola. As a result of these consultations, LDCF resources will be feasible in the local context.

30. The organisations and institutions that were consulted during the Project Preparation Grant (PPG) phase are listed below.

Organisations and institutions	Involvement during PPG
Ministry of Environment (MINAMB)	Provided overall input into design of LDCF project and project site selection.
Climate Change Cabinet (GAC)	The GAC: i) contributed to the overall design of the project; ii) coordinated inception and validation missions and workshops; iii) attended stakeholder and project team meetings; and iv) directed the selection of project intervention sites and baseline projects.
UNFCCC focal point	In addition to the above contributions, the UNFCCC focal point liaised directly with the baseline projects to secure baseline co-financing.
Development Workshop	Provided input into the design of the project, particularly in relation to specific vulnerabilities of coastal communities under conditions of climate change.
World Bank	Provided details about the Environmental Sector Support Project (PASA)
Institute of Agricultural Development	Provided input into the design of the project and assisted the project team to identify aligned ecosystem restoration and sustainable agriculture projects in Angola.
Cabinet of Food Security	Provided input into the overall design of the project. The CGA also provided specific information about the vulnerability of coastal communities related to food insecurity.
Food and Agriculture Organisation of the United Nations (FAO)	Provided details about aligned FAO projects and potential synergies with the intended use of LDCF resources.
African Development Bank (AfDB)	Provided details about the Support to the Fisheries Sector Project (FSSP) and discussed the additionality of LDCF resources to the

	FSSP.
Ministry of Transport (MINTRANS), Marine Institute	Provided input into the overall design of the project, particularly in relation to the best means of climate-proofing the transport sector along the Angolan coast.
MINPES, including: <ul style="list-style-type: none"> • Institute for the Development of Artisanal Fisheries and Aquaculture; and • National Institute for Fisheries Research. 	Provided input into the overall design of the project, particularly in relation to the best way to support artisanal fishers in the coastal zone to become resilient to current and future climate change.
INAMET	Provided input into the overall design of the project, particularly in relation to the design of the EWS. Provided specifications of INAMET equipment and systems to make sure that the pilot EWS will be properly integrated into existing national EWS. INAMET also provided information about the INAMET SDMP, which is a baseline project for LDCF resources.
Ministry of Petroleum (MINPET)	Gave input into the overall design of the project, particularly regarding the viability and design of EbA project concept notes.

2.2. Design principles and strategic considerations

31. LDCF resources in this project are aligned with the Global Environmental Facility (GEF) VI programming strategy for LDCF/SCCF projects. Therefore, the project activities will complement and build on the achievements of the existing GEF projects being planned and implemented in Angola. Particularly, the following GEF Focal Area Objectives are addressed in the project:

- CCA-1, Outcome 1.3: Climate-resilient technologies and practices adopted and scaled up. LDCF resources will enable communities to adopt EbA and climate-resilient land management practices.
- CCA-2, Outcome 2.1: Increased awareness of climate change impacts, vulnerability and adaptation. The climate change awareness-raising programme to be implemented with LDCF resources will contribute to this CCA-2 outcome. Furthermore, the project will conduct vulnerability assessments and demonstrate adaptation interventions, which will further contribute to an increased awareness about vulnerability and adaptation.
- CCA-3, Outcome 3.1: Institutional arrangements to lead, coordinate and support the integration of climate change adaptation into relevant policies, plans and associated processes established and strengthened. LDCF resources will enable GoA to procure technical support and training to the Secretariat of CIBAC and GAC to improve inter-ministerial coordination and institutional capacity of the CIBAC.

2.2.1 Institutional, sectoral and policy context

Institutional and sectoral context

32. Within Angola, the **Ministry of the Environment** (MINAMB) is responsible for the coordination of all environmental matters. In particular, this ministry formulates, executes and monitors environmental policies, on: i) biodiversity; ii) environmental technology; iii)

environmental impact assessments; and iv) environmental education. Within the MINAMB, the GAC is responsible for implementation of the Climate Change National Programme, including both adaptation and mitigation. The GAC is also responsible for addressing drought and desertification.

33. MINAMB chairs the **National Commission on Climate Change and Biodiversity** (CIBAC). This commission was created by Presidential Dispatch No. 10/12 of 1 January to drive the national climate change and biodiversity agenda at an inter-ministerial level. Members include ministers from Ministries of: i) Petroleum; ii) Transport; iii) Higher Education, Science and Technology; iv) Health; v) Agriculture and Rural Development; vi) Fisheries and; vii) Telecommunications and Information Technologies. Technical advisors of the various ministers are invited to attend meetings as necessary. These technical advisors form the Secretariat of CIBAC, which is responsible for the administration of the commission, including: i) scheduling meetings; ii) taking minutes at meetings and following up on action points with various members; and iii) setting meeting agendas.

34. The **Ministry of Agriculture and Rural Development's** (MINAGRI) mandate includes *inter alia*: i) promoting agricultural, pastoral and forestry production; ii) protecting local communities, animals and plants against plagues and diseases; iii) preparing policy that support conservation and the sustainable management of forest resources; and iv) ensuring compliance with commitments made in international agreements. The **Institute of Agricultural Development** and the **Cabinet of Food Security Department** are under the administration of MINAGRI. The IDA – under the supervision of MINAGRI– is responsible for establishing and implementing extension services to support small farmers. The Cabinet of Food Security's mandate includes *inter alia*: i) monitoring the implementation of strategies – such as *agrometeorological* monitoring and EWS – to improve the food security of the population; and ii) identifying programmes that address specific food security constraints at regional, sectoral and national levels.

35. The **Ministry of Fisheries** (MINPES) has two national directorates. These include: i) fisheries management (**National Directorate of Fisheries and Aquaculture**); and ii) fisheries infrastructure (**National Directorate of Infrastructure and Fisheries Industry**). Additionally, three public fisheries institutes are under the administration of MINPES, namely the: i) National Institute for Fisheries Research; ii) Institute for Development of Artisanal Fisheries and Aquaculture; and iii) Institute for the Support of Fisheries Industry and Technological Research.

36. The **National Institute of Meteorology** (INAMET) falls under the **Ministry of Telecommunications and Information Technologies** (MTIT). This institute has a mandate for coordinating and implementing climate monitoring. In addition, INAMET serves as a research organisation and provides scientific services in the fields of meteorology and geophysics. In particular, INAMET: i) maintains the network of automatic weather stations; ii) undertake observations of atmospheric parameters; and iii) stores, processes and disseminates climate-related data.

37. Civil protection in Angola is the mandate of the **Ministry of the Interior** (MININT). Under this ministry, the **Civil Protection Services and Fire Brigade** (CNPCB) is responsible for mitigating risks arising from accidents, natural or technological disasters. The CNPCB is represented at national, provincial and municipal level. The **National Civil Protection System** (SNPC) is the group of state agencies and private entities with the duty of collaboration in disaster situations (Presidential Decree No. 229/10 of 8th October).

38. The **Ministry of Energy and Water** (MINEA) assists in establishing and implementing the government's policies related to energy, water and sanitation. The **National Water Supply and Sanitation Directorate** promotes access to clean water and sanitation. Within MINEA, the **National Institute for Water Resources** (INRH) is responsible for the execution of the national policy on water resources and river basin management. This includes execution of exceptional measures in case of extreme events (e.g. floods and droughts) in coordination with CNPCB. INRH has a **Department of Hydraulic Works and Dam Safety** which is responsible for the development of mechanisms of prevention and flood and drought coordination.

39. The **Ministry of Petroleum** (MINPET) is mandated to monitor and inspect petroleum operations. Consequently, it promotes adequate environmental considerations in all petroleum activities. In addition, MINPET has the authority to impose penalties for pollution and other related illegal activities.

Policy context

40. The GoA has implemented policies, strategies and legislation to promote appropriate environmental management and sustainable development. The documents that are relevant to the project – and with which the project will comply – are described below.

41. **Angola 2025: Long Term Development Strategy** (EDLP) presents the long-term vision for the country development agenda and reviews the main challenges facing Angola, such as insufficient healthcare and education, regional inequality and economic development²⁰. The strategy outlines the government's intention to *inter alia*: i) stimulate job creation; ii) reduce poverty; iii) increase per-capita global domestic product (GDP); and iv) improve Angola's presence and competitiveness within the global market.

42. The **National Development Plan 2013–2017** was developed as a five year plan to execute the EDLP. Consequently, it aims to improve the living conditions of both rural and urban local communities and promote the overall stability and economic growth of Angola. The plan gives particular attention to improving economic sectors, including energy, water, infrastructure, education and health²¹.

43. **Strategic National Programme for the Water 2013–2017** is a short term framework for multi-sector investment in the water sector. It includes investment in the economic, social, environmental, legal and institutional aspects of the water sector in Angola. In the programme, the needs of different water users – including agriculture, hydropower and domestic users – are identified. The main problems facing the water sector are also identified, including floods, droughts, erosion, as well as existing and potential conflicts over water use. This programme should inform the vulnerability and economic assessments conducted with LDCF resources under Components 1 and 3.

44. **The Tourism Master Plan of Angola for 2011–2020** describes the potential of the domestic and international tourism industry in Angola, as well as barriers to achieving that potential. Identified barriers to the development of the tourism industry include i) inadequate infrastructure; ii) unreliable service; iii) excessive bureaucracy; and iv) lack of human capacity and trained staff in the hospitality and tourism industries. LDCF resources will support the development of a climate resilient Tourism Master Plan and the general development of the

²⁰ http://www.saiea.com/dbsa_handbook_update2012/pdf/chapter03.pdf Accessed 12 November 2014.

²¹ <http://www.worldbank.org/en/country/angola/overview> Accessed 12 November 2014.

tourism industry by promoting the resilience of Angola's coastal ecosystems. These activities will increase the aesthetic beauty of Angola's coastal areas and contribute to the development of ecotourism potential taking into account climate change risks.

45. **National Plan for Preparedness, Contingency, Response and Recovery from Calamities and Disasters 2015-2019** provides a framework that guides suitable and rigorous responses to natural disasters to ensure the safeguarding of the Angolan population. Additionally, it defines the means through which to minimise the adverse effects of extreme or emergency events. The plan sets out scenarios for the following climate related events: i) floods and mudslides; and ii) drought. Under the national plan, provincial contingency plans for preparing for and responding to natural disasters will be prepared based on a localized risk analyses.

46. The **Coastal Zone Master Plan** provides a strategy for development of the Angolan coastal zone. This plan currently does not include contingencies for climate change adaptation. It has also not yet been made publically available.

47. **The Artisanal Fisheries Development Plan 2014–2017** reduces poverty in local artisanal fishing communities. The plan also aims to enhance access to markets for fishing products from artisanal fishermen. Additionally, implementation of the plan will contribute to improving the health, education, living conditions and income of artisanal fishing communities²².

48. The objective of the **National Policy for Gender Equality and Equity** (Presidential Decree 223/13 of December 24) is to build an Angolan society based on equality and justice and values human rights. This policy has a specific focus on women's rights. In particular, the policy promotes non-discrimination and effective participation of men and women in a variety of spheres including *inter alia*: i) agriculture, ii) policy; iii) the economy; and iv) civil society²³.

49. The **National Policy on Forestry, Fauna and Areas of Conservation** (PNFFSAC) (Resolution 1/10 of January 14) develops the legal and institutional framework, to strengthen the management and sustainable use of natural resources. Consequently, this policy contributes to poverty reduction, food security and integrated rural development in Angola.

Legal Framework

50. The **Environmental Framework Act** (5/98 of June 19) defines the concepts and principles of environmental conservation and promotes enhancing local communities' quality of life. The act includes *inter alia*: i) recognition of the right to environmental education and training; ii) promotion of a balance between environmental sustainability and development; and iii) protection and preservation of the natural resources including national genetic resources.

51. The Angolan **Water Act** (6/02 of June 21) applies to surface and ground water. This law outlines water management principles for government. These include *inter alia*: i) the rights of individuals to have access to water; ii) the concurrent use of the water management policy with land-use planning and environmental policies; and iii) the unification of water resource management practices. The law also advocates the establishment of a new administrative policy for the water sector which will ensure *inter alia*: i) access to water; ii) a balance between

²² <http://allafrica.com/stories/201402150130.html> Accessed 16 February 2015.

²³ <http://www.peacewomen.org/content/angola-family-ministry-action-plan-promote-greater-gender-equality> Accessed 16 February 2015.

water supply and demand; iii) adequate sewage systems; and iv) the sustainable use of existing water supplies.

52. The **Land Act** (9/04 of November 9) considers land as property of the state and proposes that land should serve the following uses: i) as shelter for Angolan civil society; ii) as a source of natural resources that can be used for mining, agriculture, forestry and land planning; and iii) as a support for economic, agricultural and industrial activities. This act contains a number of environmental related aspects that promote sustainable development in Angola and the better use of the soil and natural resources²⁴.

53. The **Land-Use Planning and Urban Development Act** (3/04 of June 25) promotes integrated land-use planning. This includes socio-economic considerations and promotion of synergies between the urban and rural areas. Additionally, this law promotes the establishment of a decentralised system to coordinate the work of land-use planning.

54. The **Agrarian Development Base Law** (15/05 of December 7) enables the development and modernisation of the agricultural sector through the implementation of support mechanisms and incentives to agricultural activities.

55. The **Biological and Aquatic Resources Act** (6A/04 of October 8) replaced the **Fisheries Act** (20/92) in 2004. This act emphasises the importance of developing policies to conserve and restore biological water resources. The act also includes a number guidelines and regulations to promote the sustainable use of these aquatic resources by individuals and economic sectors such as fishing and aquaculture. In 2005, following the formation of this Act, a number of regulations were adopted. These included concessions on *inter alia* i) fish farming; ii) taxation of fisheries; and iii) fishing in general. In addition, a number of laws and decrees that established the structure of the MINPES, the Institute for Development of Artisanal Fisheries and Aquaculture Institute and the National Institute for Fisheries Research (INIP) were issued.

56. The **Law on maritime spaces** (Law 14/10 of July 14) regulates the maritime rights and duties of the Angolan State and defines maritime areas under national sovereignty. Such areas include: i) internal waters; ii) territorial sea; iii) the contiguous zone; iv) the exclusive economic zone; and v) the continental shelf.

57. The **Organisation and Functioning of the Local Municipalities Law** (17/10 of July 29) replaced the **Local Municipalities Decree-Act** (17/99, October 29th). This law establishes the: i) principles and rules of organisation; and ii) functioning of the administrative bodies.

Multilateral agreements

58. Angola has ratified, among others, the following international conventions:

- United Nations Convention on the Law of the Sea (UNCLOS) (1990);
- United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification (UNCCD) (2000);
- United Nations Convention on Biological Diversity (1997);
- UNFCCC (2000); and

²⁴ Russo, V., 2005: 'Early Warning and Assessment Documents on Angola for the Africa Environment Outlook. Task 1: Review environmental policies and regulations in Angola and provide a comprehensive list'. Prepared for the United Nations Environment Programme (UNEP) and Division of Early Warning and Assessment (DEWA).

- Kyoto Protocol to the United Nations Convention on Climate Change (2007).
- Sustainable Development Goals

The Sustainable Development Goals (SDGs) are a set of targets that have been proposed to replace the Millennium Development Goals, which expire in 2015. However, the SDGs take a broader approach on environmental sustainability. There are 17 SDGs that are to be achieved by 2030. The LDCF project will contribute to the following SDGs:

- SDG 5 – *Achieve gender equality and empower all women and girls*, by promoting gender equity throughout the project and targeting women in specific project activities;
- SDG 6 – *Ensure availability and sustainable management of water and sanitation for all*, by implementing EbA interventions in wetlands and mangroves, introducing climate-resilient land management techniques and improving waste management in coastal areas;
- SDG 13 – *Take urgent action to combat climate change and its impacts*, specifically:
 - 13.1 *Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries*, by implementing EbA interventions in four coastal communities and introducing an EWS at Barro do Dande;
 - 13.2 *Integrate climate change measures into national policies, strategies and planning*, by capacity building and strengthening of coordination mechanisms within the Secretariat of CIBAC, and;
- SDG 15 – *Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss* through the rehabilitation of wetlands and the introduction of climate-resilient land management techniques.

2.2.2 Ongoing and related initiatives

59. Numerous GEF and non-GEF funded projects that focus on adaption to climate change or ecosystem restoration are currently being implemented in Angola. These initiatives provide opportunities for synergies and knowledge exchange with the proposed LDCF project. The project management team will coordinate efforts and establish linkages with similar projects. The related projects are described below. For more information on the ongoing and related initiatives listed below – including linkages with this project – please see Annex 9. Baseline projects are detailed under Section 2.3.

- The LDCF-funded UNDP project *Promoting Climate-Resilient Development and Enhanced Adaptive Capacity to Withstand Disaster Risks in Angola's Cuvelai River Basin* (2014–2017) (US\$4,416,210);
- The FAO climate change adaptation project *Integrating and Up-Scaling Climate Resilience into Agricultural and Agropastoral Production Systems through Soil Fertility Management in Key Productive and Vulnerable Areas Using the Farmers Field School Approach* (US\$4,416,210);
- The FAO GEF LDCF-funded climate change adaptation project *Enhancing Climate Change Resilience in the Benguela Current Fisheries System* (2012–2017) (US\$4,725,000);
- The AfB, GoA and GEF funded *Environmental Sector Support Project* (PASA) (2010–2015) (US\$12,314,814);
- The AfDB/GEF-LDCF project *Integrating Climate Change into Environment and Sustainable Land Management Practices* (US\$6,668,182);
- The United Nations Environment Programme (UNEP) GEF-LDCF project *Umbrella Programme for National Communication to the UNFCCC* (US\$11,330,000);

- The UNDP/UNEP GEF-LDCF funded project *Assisting LDCs with Country-driven Processes to Advance National Adaptation Plans (NAPs)* (US\$999,000);
- The UNDP/UNEP-LDCF project *Expanding the Ongoing Support to LDCs with Country-driven Processes to Advance the NAPs* (US\$6,200,000);
- The FAO GEF Land Degradation/LDCF project *Land Rehabilitation and Rangelands Management in Smallholders Agro-pastoral Production Systems in South Western Angola* (US\$3,013,636); and
- The GoA, WB and the European Union. Funded Local Development Project (FAS) (2010–2015) (US\$121,700,000).

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2.2.3 National and local benefits

60. LDCF resources have been designed to be used in full alignment with Angola's national priorities and identified needs related to climate change adaptation. In particular, through its focus on climate change adaptation in the coastal zone, LDCF resources will contribute to the national priorities identified under the UNFCCC by addressing sensitivity to climate change risks. The activities of the project will also contribute to broader national objectives related to sustainable development, environmental protection and improved quality of life for rural communities. Importantly, LDCF resources will also contribute towards the aims of the United Nations Convention on Biological Diversity (1997) and the Millennium Development Goal of ensuring environmental sustainability by restoring important coastal wetland ecosystems in partnership with local communities. The emphasis of the project's activities on degraded ecosystems, with a particular focus on coastal wetlands, mangroves and upstream river areas, will result in the restoration and improved management of ~561 hectares of wetlands. Additionally, LDCF resources will contribute towards the Sustainable Development Goals, especially those focused on eradicating extreme hunger and poverty. This will be achieved by improving livelihood and food security in coastal intervention sites through EbA interventions.

61. The project also has more specific national benefits. These include improved understanding of the impacts of climate change on the coast of Angola by sectoral ministries, INAMET and CNPCB. This will be achieved by undertaking a detailed vulnerability assessment of the coastal zone. Training on the results of this vulnerability assessment will strengthen technical capacity of government staff at local and national levels to analyse, predict and respond to climate change effects, access policy-relevant data and deliver relevant information to local communities. A further national benefit provided by LDCF resources is an assessment of the economic impacts of climate change on Angola's coastal zone, disaggregated by sector. This economic assessment will raise awareness about the need for climate change adaptation to be integrated into relevant sectoral policies/plans and related budgets. Proactive planning for adaptation will help to climate-proof provision of essential services in the coastal zone. For example, the MINPET needs to take into account the risk that increased coastal storm surges under climate change could have on fisheries infrastructure along the coast, such as processing stations.

62. An additional benefit of the project at national level will be increased inter-ministerial coordination and institutional capacity to adapt to climate change in Angola. The CIBAC provides strategic oversight related to climate change in different sectors. Consequently, strengthening this committee to promote, collaborate and information sharing between ministries will advance climate change adaptation at a national level.

63. At a local level, the climate change vulnerability of four communities along the coast of Angola will be addressed with LDCF financing. Climate-resilient land management and EbA interventions will enhance natural and agricultural ecosystem services, thereby contributing to improved livelihoods agricultural production. At a local level, food and livelihood security will be enhanced. The project will directly benefit an estimated ~3,680 people who live within the proposed project restoration sites. It is envisioned that these community members will participate directly in the implementation of the project's activities, particularly those related to implementation of ecosystem restoration and SLM practices. Within the surrounding areas in the vicinity of the project's restoration sites, the project will generate indirect benefits to an estimated ~49,000 people through *inter alia*: i) reduced vulnerability to climate-related hazards such as flooding; ii) improved agricultural productivity through reduced erosion and loss of fertility of soil; iii) improved productivity of fisheries; and iv) improved quality of water as a result of reduced sedimentation and pollution. Additionally, the EWS piloted in Barra do Dande will improve the capacity of coastal communities to respond to extreme climate events, such as floods. A functional EWS will help to prevent loss of life, injury, and damage to property by warning people timeously of impending floods. Training of decentralized extension officers from CNPCB and other relevant local government representatives will promote the replication of EWS in other coastal communities, further preventing loss of life and damage to property.

2.2.4 UNDP comparative advantage

64. The UNDP's comparative advantage, as articulated in the GEF Council Paper C.31.5 "Comparative Advantages of GEF Agencies" lies in the areas of capacity building and providing technical support. Furthermore, the UNDP's has the requisite expertise in project design and implementation to ensure success. Specifically, LDCF resources will build upon UNDP's comparative advantage stemming from experience in working with government and communities in Angola. Additionally, the project will draw on the UNDPs' global experience on: i) establishing and strengthening institutional, policy and legislative mechanisms; ii) technical and institutional capacity building; iii) mainstreaming climate change adaptation and EWSs into development planning; and v) harnessing best practices and community-based approaches for climate change adaptation.

65. The experience of the UNDP has been built by supporting projects on adaptation at global, regional and national levels. Additionally, this agency has familiarity with implementing projects that development of climate-related information. Over the past decade, it has actively supported work on NAPA, as well as National Communications to the UNFCCC in ~140 countries. Recently UNDP assisted national and subnational agencies to formulate and implement Green, Low-Emission and Climate-Resilient Development Strategies (Green LECRDS). In conjunction with this, UNDP has completed detailed climate-scenario development for several regions.

66. UNDP's support for Rio+20 and participation in the African Economic Conference in Kigali resulted in the GoA having increased understanding for the relationship between sustainable development and inclusive growth. With UNDP's assistance, GoA created a multi-sectorial commission for the drafting of the Rio+20 report. Civil society and the private sector were also engaged for this report. After Rio, UNDP was requested to support a conference on sustainable development and the green economy with the objectives of introducing decisions- and policy-makers to these concepts. Additionally, the UNDP provided input to a multi-sectoral working group responsible for drafting a national strategy for sustainable development.

67. The UNDP Country Office is also supported by Regional Technical Advisors at UNDP offices in Addis Ababa, as well as by policy, adaptation, economics and climate modelling experts in New York, Cape Town and Bangkok. A network of global Technical Advisors provide additional technical oversight and leadership, helping to ensure that projects on the ground achieve maximum policy impact. There are also other similar LDCF, SCCF and Adaptation Fund-financed projects within the region that are supported by UNDP. Consequently, there is substantial in-house technical expertise that can support the GoA with project implementation. Furthermore, UNDP's use of the National Implementation Modality (NIM) serves to build capacity for project management and reporting in GoA including directly managing financial resources—an important feature to strengthen local capacities for direct access and management of funds. This modality will prove beneficial for supporting ongoing partnerships between UNDP and GoA for project implementation. UNDP presence at the national level is highly appreciated by the GoA, as interaction and day-to-day support (technical, administrative and financial) can be easily provided.

68. Strong partnerships between the UNDP and national institutions such as MINAMB, MININT and MINEA in Angola have been established during previous projects. A recent outcome evaluation of the environment sector indicates UNDP adds value in the sector mainly because of its well established relations with key national institutions. Implementing partnerships with organisations, such as FAO, and donors including the GEF, USAID and the Government of Norway have also been built. UNDP Angola has one of the largest portfolio of GEF projects under implementation in the country.

69. UNDP is also uniquely positioned to exercise Results-Based Management and leverage its extensive knowledge of the similarities and differences between countries at different stages of development. Furthermore it translates this knowledge into evidence-based recommendations for effective, adaptable development solutions. UNDP's emphasis on applying a Human Rights Based Approach and on gender equality in development programming will therefore determine the design and implementation of LDCF resources.

2.3. Project Objective, Outcomes and Outputs/activities

70. The goal of this LDCF financed project is to increase the resilience of Angola's vulnerable coastal communities and economic sectors – including fisheries, agriculture, transport, energy, water and tourism – to the negative effects of climate change. The objective of the project is to enhance the capacity of national government and coastal communities to adapt to climate change along the coast of Angola. The project will achieve this by enhancing the scientific and technical capacity of government staff at a local and national level to identify and prioritise climate change adaptation activities in coastal areas. This will include investments in strengthening the hydrometeorological monitoring network as well as increasing the capacity for forecasting and issuing early warnings for specific climate hazards. The project will build the resilience of communities living in and around Chiloango, Barra do Dande, Longa and Bero by demonstrating the EbA approach as a technique for climate change adaptation, particularly through the targeted restoration of degraded mangrove and wetland ecosystems. LDCF investments will be further strengthened by building the capacity of coastal communities to design and implement climate-smart practices such as EbA and climate-resilient land management, thereby strengthening the capacity of communities to adapt to climate change while increasing household income through diversification of livelihoods. At a central level, the project will enhance institutional capacity and improve coordination for adaptation at an inter-ministerial level, including through investments in training, technical support, and increased availability of information and knowledge to inform adaptation planning. The objectives of the project will be achieved through four complementary outcomes.

COMPONENT 1: Enhanced scientific and technical capacity for adaptation in coastal zone areas.

OUTCOME 1: *Strengthened technical capacity of government staff at local and national level to analyse, predict and respond to climate change effects, access policy-relevant data and deliver relevant information to local communities.*

LDCF: US\$1,568,000

Co-financing amounts for Outcome 1: US\$5,861,467

Implementing Agency: UNEP [a separate project document is annexed that provides additional details]

Without LDCF/SCCF Intervention (baseline)

71. At present, a climate change vulnerability assessment of Angola's coastal zone – including coastal sectors such as fisheries, agriculture, transport, energy, water and tourism – has not been conducted. This is because of: i) limited technical capacity within SNPC and INAMET, provincial and local government representatives and line ministries to conduct such an assessment; ii) limited availability of data necessary to undertake such an assessment; and iii) the dispersion of appropriate climatic and environmental data across various government departments and NGOs. One assessment, the ACEPA report, has collated some of this information, however it was an environmental and social sensitivity analysis aimed at prioritising sensitive areas along the coast for management in case of an oil spill. The overall limited understanding of the current and future effects of climate change along Angola's coast hinders the identification and planning of locally appropriate and cost-effective adaptation interventions for important coastal sectors.

72. In addition to vulnerability assessments, a functional weather monitoring and forecasting system is an important element for formulating an appropriate set of coastal adaptation measures. However, the hydrometeorological monitoring network within Angola is limited and poorly maintained. Ongoing initiatives, such as INAMET's SDMP, aim to increase the coverage of the hydrometeorological monitoring network, but progress in this regard has been slow. Furthermore, there are too few qualified meteorologists and hydrologists to manage the network of weather and hydrometric stations²⁵. The availability of climate and weather information is further undermined by a 30-year gap in meteorological data, coinciding with the period of civil war, for many regions of Angola. It is in part because of limited infrastructure and insufficient human resources that INAMET is unable to consistently and efficiently generate and issue early warnings for extreme climate events such as floods and droughts²⁶.

73. In principle, INAMET is responsible for producing the technical and scientific information upon which early warnings are based. The climate risk identified by INAMET is then graded according to the alert level and transmitted to SNPC via email or telephone. If the alert is classified as 'high impact', it becomes the responsibility of the SNPC to transmit warnings to the population via its extension network, email, radio and other means of communication. INAMET also post the early warning on their website. If a climate-related threat is localized to a small area, provincial government administrative structures should be informed and become involved

²⁵ For example, there are only 4 meteorologists at a national level.

²⁶ UNFCCC. (2011). Angola: National Adaptation Programme of Action. See: <http://unfccc.int/resource/docs/napa/ago01.pdf>
Accessed 20 October 2014.

in the response. However, if a flood or drought event affects multiple localities, national bodies should be informed and a national or even an international response may be required. At present, the EWS system described above is 'paper-based' rather than fully operational. The communication system that is in place to transfer early warnings in real time from INAMET to SNPC, or from SNPC to its extension network, is unreliable. Additionally, no reliable communication system is in place between SNPC and provincial and national bodies that are responsible for assisting communities during flood and drought events. Consequently, when a medium or high impact incident is imminent, early warnings do not reach the vulnerable communities in time. This became evident when no early warnings were issued for flash floods that took place in the coastal cities of Lobito and Benguela in March 2015. These floods were classified as high impact and resulted in loss of life and catastrophic damage to property.

74. Data-sharing between government departments is also a barrier to generating early warnings for coastal communities. Currently, data from the national hydrometeorological monitoring network is collected and analysed by INAMET. However, other government departments are also involved in the collection of climate-related data. For example: i) the CNPCB monitors precipitation; ii) CNPCB and National Water Directorate (DNA) monitor the level of rivers and streams; and iii) National Energy Production Company monitors dam level²⁷. Currently, these data are not shared with INAMET. This reduces the quality of any early warnings INAMET produces for coastal communities.

75. To address the existing gaps in data, communication and capacity related to national climate forecasting and EWS, a GEF UNDP project entitled 'Promoting climate-resilient development and enhanced adaptive capacity to withstand disaster risks in Angola's Cuvelai River Basin' (Cuvelai project) has been initiated (2015–2019). The Cuvelai project will enhance the capacity of hydro-meteorological services and networks to predict climatic events and associated risks. It will also develop a more effective and targeted delivery of climate information including flood and drought early warnings in the Cuvelai River Basin. This will be achieved by transferring appropriate technology, infrastructure and skills to hydro-meteorological services, user-agencies and local communities, particularly in the Province of Cunene. LDCF resources will build on the national-level EWS capacity developed through the Cuvelai project by creating a pilot EWS in Barra do Dande in the Bengo Province. This pilot will replicate the EWS pilot implemented by the Cuvelai Project in the Cuvelai River Basin and will provide another example for the GoA to emulate in other coastal provinces.

Component 1 baseline projects

76. INAMET's Strategic Development Master Plan (SDMP) (2014–2020) is financed by the GoA²⁸ (US\$50.6 million). The primary objective of the SDMP is to develop INAMET into a highly effective public institution in service of public safety and economic development. The SDP has three priorities: i) promoting good governance and strengthening INAMET's technical capacity; ii) applying climate and geophysical data to support various socio-economic activities; and iii) designing INAMET's human resources policy.

77. Component 1 of LDCF-financed project will build on the second SDP priority. Under this priority, Goal 14 is to extend the hydro-meteorological information system of the Kwanza River

²⁷ For example: i) the CNPCB monitors precipitation; ii) CNPCB and National Directorate of Water Supply and Sanitation (DNAAS) monitor the level of rivers and streams; and iii) National Energy Production Company monitors dam levels.

²⁸ In the framework of the Presidential Decree 17/2014, the GoA will be financing the rehabilitation of the whole Meteorological Monitoring Network with installation of Automatic Weather Stations.

basin to other basins. This goal also includes extending the mechanism for establishing an EWS along the Angolan coast. By piloting a well-designed case study that takes into consideration the effects of climate change on coastal communities, LDCF resources will develop a best practice climate monitoring and EWS model that can be replicated in other vulnerable coastal areas. Consequently INAMET will have improved capacity to monitor climate change. LDCF resources will create an EWS pilot in the Barra do Dande area and will employ best practice methodologies to: i) install climate and hydrological monitoring equipment; ii) develop flood forecasting and early warning response plans with coastal communities; and iii) train extensions workers on delivery of early warning information.

78. Goal 14 of the SDP also includes mapping the climate change vulnerabilities of specific sectors – including agriculture and fisheries – along the Angolan coast. Outcome 1.1 of LDCF-financed project will build on this and undertake a detailed climate change vulnerability assessment for Angola's coastal zone. In addition to an overall vulnerability assessment, assessments will be provided for fisheries, agriculture, water, energy and tourism sectors. Appropriate government staff – including employees of INAMET and CNPCB – will also be trained to understand, interpret and replicate the climate change vulnerability assessments produced under Outcome 1. The SDMP will contribute co-financing of at least US\$6,161,467 to this LDCF-financed project.

With LDCF/SCCF Intervention (adaptation alternative)

79. Several important economic sectors based along Angola's coast – including fisheries, agriculture, transport, energy, water and tourism – are vulnerable to current and future effects of climate change, including *inter alia* more frequent and severe floods, droughts and storm surges. To address these threats, activities under Outcome 1 of the project will strengthen the technical capacity of national government staff in INAMET to collect, analyse and disseminate weather and climate data. Additionally, INAMET staff will be trained to package early warnings based on available data. Moreover, extension officers from CNPCB and other relevant provincial and local government representatives will be trained to disseminate early warnings to coastal communities.

80. Initially under Outcome 1, vulnerability assessments will be undertaken for Angola's coastal zone. These assessments will focus primarily on economic sectors that are vulnerable to climate change and will include the development of recommended adaptation responses. Assessments will be carried out using PROVIA guidelines²⁹. Local academic institutions – such as Agostinho Neto University – will be involved in the vulnerability assessments, contributing data and expertise. The information generated under this Outcome will inform the development of other project activities. Additionally, activities in this component of the project will focus on the establishment of an EWS in Barra do Dande. This will be achieved by: i) installing appropriate equipment and software, including *inter alia* weather and hydrological monitoring stations; ii) strengthening the capacity of CNPCB to disseminate early warnings effectively to local communities; and iii) strengthening the capacity of local communities to respond to early warnings. To promote appropriate responses at a local level, an early warning response plan will be developed in collaboration with local communities.

²⁹ PROVIA guidance on Assessing Vulnerability, Impacts and Adaptation to Climate Change (UNEP, 2013) is structured along a five-stage iterative adaptation learning cycle: i) identifying adaptation needs; ii) identifying adaptation options; iii) appraising adaptation options; iv) planning and implementing adaptation actions; v) monitoring and evaluation of adaptation.

81. Outcome 1 of the project will build on the ongoing work of other projects and organisations in Angola. In particular, LDCF resources will work closely with the GEF/UNDP project that is developing the climate forecasting and EWS in the Cuvelai River Basin (see Annex 9 for a more detailed description of this project). Importantly, the Cuvelai project will work with stakeholders in INAMET and MININT to build national-level capacity for climate forecasting and EWS provision. This national-level capacity building and technical support will benefit the local-level interventions of the LDCF-financed project in Barra do Dande. At present, residents of Barra do Dande are particularly vulnerable to flooding as a result of the establishment of housing in high-risk areas around the river mouth. Flooding is already commonplace and is predicted to increase in frequency and intensity under conditions of climate change. Informal coping strategies include elevating valuable household possessions above the floor and temporary evacuation of homes when the level of the river rises or when there is heavy rain. However, in the event of a catastrophic flood event occur, the lives and property of people living in parts of the settlement are at risk in the absence of a functional EWS and early warning response plan.

Output 1.1: A set of detailed sectoral and localised vulnerability assessments for Angola's coastal zone.

The activities to be implemented under Output 1.1 are:

1.1.1 Undertake a detailed climate change vulnerability assessment – including identification of predicted climate change impacts – for Angola's coastal zone.

1.1.2 Produce sector-specific vulnerability assessments detailing climate change impacts on important coastal sectors – including *inter alia* fisheries, agriculture, transport, energy, water and tourism – and appropriate adaptation responses.

1.1.3 Train appropriate government staff to understand, interpret and replicate climate change vulnerability assessments in Angola's coastal zone.

1.1.4 Disseminate the results of the coastal zone and sector-specific vulnerability assessments, including an integrated vulnerability map, to development planners and policy makers.

Output 1.2: Operational EWS developed in Barra do Dande.

The activities to be implemented under Output 1.2 are:

1.2.1 Conduct an assessment to identify the meteorological equipment required to establish a flood and drought EWS in Barra do Dande.

1.2.2 Identify and assess sites for the installation of weather stations and hydrological monitoring.

1.2.3 Procure, install and test relevant weather and hydrological monitoring stations at the identified sites.

1.2.4 Establish an appropriate communication system to transmit meteorological and hydrological information to INAMET, and transfer flood and drought early warnings from INAMET Forecasting Centre, SNPC and relevant local authorities at Barra do Dande.

1.2.5 Train extension officers from SNPC and other relevant local government representatives at Barra do Dande site on interpretation of climate information and translation into locally relevant climate forecasts and advisories³⁰.

1.2.6 Develop flood and drought early warning response plans with pilot communities in Barra do Dande.

COMPONENT 2: Local demonstrations and capacity building interventions on ecosystems rehabilitation and adaptation measures in coastal areas.

OUTCOME 2: EbA technologies and climate-resilient land management techniques transferred to coastal communities in Angola to reduce their vulnerability to droughts, rainfall variability, and extreme events.

LDCF: US\$3,080,000

Co-financing amounts for Outcome 2: US\$3,000,000

Implementing Agency: UNEP

Without LDCF/SCCF Intervention (baseline)

82. Climate change is negatively impacting coastal communities in Angola, including those living in Chiloango, Barra do Dande, Longa and Bero (see Section 1.1). The livelihoods of the rural coastal communities in the abovementioned sites are underpinned by ecosystem services. In particular, these communities depend strongly on artisanal fishing, supplemented by subsistence agriculture and commercial hunting for the bush meat market³¹. Given their reliance on natural resources, and the negative effects of future climate change impacts – including more frequent and severe floods and droughts – on coastal ecosystems, these communities will become increasingly vulnerable. The baseline situation at each of the four project sites is described in Annex 10 and a map of project sites in Annex 8.

83. There is therefore an urgent need to introduce innovative practices to reduce the vulnerability of coastal communities living in Chiloango, Barra do Dande, Longa and Bero to the negative effects of climate change. Currently, projects that focus on climate change adaptation – such as the Cooperation for the Development of Emerging Countries (COSPE) Project for the Protection and Development of Angolan Coastal Forests – are being implemented in areas outside of these targeted intervention sites. In general, these projects are promoting climate-resilient agriculture and the integration of related interventions into existing agricultural practices. No previous or ongoing initiatives have demonstrated the EbA approach in Angola's coastal areas. Additionally, although there are some ongoing initiatives which are focused on the development of the livelihoods of artisanal fishers living along the Angolan coast³², these initiatives do not take the effects of current and future climate change into consideration (see Section 2.2.2 and Annex 9). Consequently, there is a risk that the on-the-ground activities of these initiatives will not be successful under future conditions of climate change.

³⁰ Based on existing informal EWS, means of disseminating climate forecasts to local communities could include a flag alert system. Additionally, extension workers could also implement a system of telephoning or visiting pre-identified community members. These individuals will be tasked with passing the early warning message on to others in their immediate vicinity by knocking on doors or using a loud hailer.

³¹ which is currently illegal but with not enforced.

³² These projects are working with fisher cooperatives. Fishers are moving away from associations and towards cooperatives as a means of organising themselves. A law will soon be approved to strengthen cooperatives as legal entities, enabling them to access more government funding support.

Component 2 baseline projects

84. The Support to the Fisheries Sector Project (FSSP) (2012–2017) is financed through the AfDB (US\$18,518,518). The project will develop artisanal fishing livelihoods and promote economic activity along the Angolan coast through investments in transport, waste management and fish processing infrastructure. The long-term aims of the project are to: i) improve the well-being of artisanal fishers through increased household income; ii) contribute to the GoA's efforts to reduce poverty and accelerate economic growth on a sustainable basis; and iii) strengthen the capacity of institutions responsible for fishery management. The FSSP will focus on artisanal fishers living in 14 communities along the Angolan coast. As in LDCF-financed, direct beneficiaries of the FSSP will include women, who constitute 80% of small scale fish processors and traders. The project will also be of benefit to ancillary trades such as boat repairers, net menders, transport providers and petty traders working in project sites.

85. Activities under this project include *inter alia*: i) construction of four artisanal fish landing sites/centres; ii) rehabilitation of 14 km of access roads; and iii) construction of water supply and sanitation facilities and a power supply system. The effects of future climate change – such as coastal flooding, reduction in fish stocks, soil erosion and storm damage – will negatively affect the infrastructure installed by the FSSP. In particular, the predicted increase in rainfall intensity in more northern coastal provinces will result in an increase in frequency and severity of floods. Coastal infrastructure constructed by the project – including access roads and fish landing centres – will be vulnerable in flood-prone provinces such as Bengo and Luanda. LDCF resources will help to climate-proof the activities of the FSSP through targeted EbA interventions under Component 2. The EbA interventions implemented will demonstrate techniques for climate-proofing coastal infrastructure using an EbA approach. For example, LDCF resources will be undertaking mangrove rehabilitation in and around Barra do Dande in the Bengo Province, where the FSSP is installing a fuel station. Rehabilitation of mangroves at Barra do Dande will safeguard infrastructure in coastal areas from damage from flooding and storm surges. The FSSP will contribute co-financing of at least US\$3,000,000 to this LDCF project.

86. The UNEP project “Building Capacity for Coastal Ecosystem-based Adaptation in Small Island Developing States (SIDS)” is financed by the European Commission and will run from 2014 to 2016. This project aims to assist countries and regions to develop and apply ecosystem-based adaptation approaches to maintain and enhance the resilience of tropical coastal ecosystems and the services they provide to coastal communities in SIDS.

The LDCF project will build lessons learned through the SIDS project regarding adaptation in coastal ecosystems. In particular, lessons from the SIDS project will help to advise communities on the correct choice of EbA interventions in coastal ecosystems. Further to this, the guide “Options for ecosystem-based adaptation in coastal environments” produced by the SIDS project be promoted as a planning tool and a broader guide for EbA interventions in Angola. As such, the SIDS project will contribute \$150,000 as cofinancing to the LDCF project.

With LDCF/SCCF Intervention (adaptation alternative)

87. Currently, the capacity of communities living in the four interventions sites to adapt to extreme climate-related events – including floods, storm surges and sea-level rise – is limited. To strengthen this capacity, LDCF interventions under Outcome 2 will: i) rehabilitate coastal ecosystems using EbA interventions with the aim of setting in place a process for full

restoration; and ii) implement climate-resilient land management interventions – including sustainable agriculture – to promote sustainability of EbA interventions and further promote resilience of local livelihoods under conditions of climate change. The rehabilitation and climate-resilient management of these coastal ecosystems will provide protection against beach erosion from storm surges and enhance ecosystems goods and services, as described below.

88. The project will promote and demonstrate the EbA approach at intervention sites in Chiloango, Longa, Barra do Dande and Bero through targeted rehabilitation of degraded ecosystems such as mangroves, marshlands and rivers. The selection of plant species to be used in EbA demonstrations will prioritise the selection of plant species that will be resilient to the predicted climate vulnerabilities at each intervention site. Furthermore the project will prioritise species which generate multiple goods and services for the benefit of local communities. Examples of EbA activities to be promoted by the project will include the rehabilitation and establishment of mangroves that will: i) provide a protective barrier against sea-level rise and storm surges; ii) reduce coastal inundation by tidal waters; and iii) increase the productivity of local fisheries by provide breeding habitats for commercially valuable fish species. In addition, the project will demonstrate the benefits of restoring wetland and riparian ecosystems, including rehabilitation of vegetation along river banks, which will provide multiple benefits such as: i) reduced severity and frequency of flooding of communities in low-lying areas; ii) reduced loss of fertile topsoil through erosion; iii) reduced deposition of silt and sediment; and iv) improved filtration and resultant quality of fresh water. In particular, the project will focus on increasing the stability of the shoreline at the mouth of the Bero River and restoring the adjacent marshlands. The rehabilitation of the Bero River area will reduce the rate of beach erosion from sea-level rise, thereby providing protection for coastal infrastructure and local communities. For all planned EbA interventions, an Environmental Impact Assessment will be conducted at each site (if deemed necessary following national environmental regulations) to ensure that activities do not have unintended negative consequences.

89. In addition to the demonstration of EbA in several ecosystem types, the project will also demonstrate other climate-resilient approaches to land management. These climate-resilient practices for land management will be tailored to each of the project sites (described further Annex 10) and will be complementary to EbA activities by promoting agricultural, waste management and sustainable harvesting practices that promote ecosystem health and sustainable livelihoods under climate change,

90. The EbA and climate-resilient land management approaches demonstrated under this outcome will be implemented through the appointment of appropriately skilled and experienced organisations as technical service providers. These service providers will be national-level NGOs or consultancies such as ADRA and Development Workshop, which will work closely with local initiatives during implementation. Importantly, communities at pilot sites will be involved in the site selection and implementation of the project's activities through community management committees established with the support of the project. Importantly, these committees will build on existing structures within each community including *inter alia* fishing cooperatives, NGO groups and/or religious organisations. Management plans for the implementation of community-based EbA activities will be developed and implemented by these committees in Chiloango, Barra do Dande, Longa and Bero. These management plans will include a strategy for the long-term sustainability and maintenance of the project's activities. Sub-committees of the community management committee will be established to focus on specific elements of the management plan such as *inter alia*: i) establishment of patrols to prevent activities such as illegal logging and hunting; and ii) waste management; and iii) water quality monitoring. By managing existing and rehabilitated wetland ecosystems sustainably through patrols and waste management, local

communities will retain the adaptation benefits of these ecosystems, including buffering from coastal storms and floods.

91. Also under this outcome, coastal communities at the project intervention sites will be trained on: i) implementing, monitoring and maintaining EbA to generate long-term benefits; and ii) techniques and practices for climate-resilient land management. This training will include information about EbA-related conservation issues such as responsible hunting for subsistence³³. Additionally, representatives of local government will be provided with training on the implementation and maintenance of investments in EbA and climate-resilient land management techniques including *inter alia* crop rotation and selection of diverse locally-adapted crops. These training activities will promote replication of project interventions in other nearby communities.

92. Community management committees and local community members will also be trained on the early warning response plans developed under Outcome 1. This training will focus on interpreting and responding to early warnings.

93. An education programme will be established in local schools in and around the four project sites to increase awareness of the benefits of EbA. Educational materials will include media such as board games, posters, storytelling and drawing competitions. Content produced and lessons learned from education activities will be shared with the 'Angola Content' education programme, which is part of the National Environmental Education Programme (PRONEA), thereby upscaling the project's awareness-raising activities.

94. Finally, based on the lessons learned through the implementation of project interventions, EbA project concept notes will be developed to encourage private sector investment in EbA in and around Chiloango, Barra do Dande, Longa and Bero. Currently, petroleum and mining companies are contractually obliged to invest in social and environmental projects in Angola, but have very little guidance on how to invest for maximum impact. Consequently, CSI projects tend to be piecemeal and are implemented over short timescales. The project will therefore develop EbA concept notes to support an enabling environment for the private sector to make social investments using CSR budgets that will generate multiple social, ecological and climate change benefits. Additionally, the project will engage large public funds such as the Environment Fund to investigate potential sources of financing to fund the EbA project concept notes.

95. The EbA project concept notes will be tailored for different CSI budgets and will include *inter alia*: i) details on the vulnerability of the target sector to climate change ii) the economic rationale for investing in EbA; and iii) quantification of the social and environmental benefits of the investment. Additionally, technical details will be included in the EbA project concept notes that would enable replication of project activities, including *inter alia*: i) links to the EbA protocols developed under Output 2.1; ii) practical lessons learned by LDCF-financed project; iii) budgets required to upscale EbA interventions; and iv) details of suppliers and equipment in pilot sites. Where practical, upscaling of project interventions will be focussed on areas around Chiloango, Barra do Dande, Longa and Bero in order to make use of the implementation capacity of local communities developed under this outcome.

96. The Project Management Unit (PMU) will engage with relevant forums – such as the Petroleum Industry Steering Committee and the Environment Fund – to: i) disseminate the concept notes developed under this Output; and ii) raise awareness of the CSI benefits of these projects. The project concept notes will also be shared with government institutions – such as Sonangol and the ministries of Transport and Fisheries – that have large development projects planned along the coast. Dissemination of the concept notes will also be conducted under Outcome 4.1 as part of climate change awareness raising activities targeting private sector stakeholders.

Output 2.1: A suite of EbA interventions, appropriate to local ecosystems, implemented in pilot sites in Chiloango, Barra do Dande, Longa and Bero.

The activities to be implemented under Output 2.1 are:

2.1.1 Undertake biophysical, socio-economic and market assessments at each of the chosen intervention sites to identify multi-use plant species for EbA interventions (e.g. wetland rehabilitation, reforestation, mangrove rehabilitation) that can provide co-benefits to local communities.

2.1.2 Identify indigenous multi-use and climate-resilient species for EbA interventions (e.g. wetland rehabilitation, reforestation, mangrove rehabilitation).

2.1.3 Develop protocols to guide the implementation of EbA interventions (e.g. wetland rehabilitation, reforestation, mangrove rehabilitation).

2.1.4 Identify and contract an appropriately skilled and experienced organisation at each of the four project intervention sites to implement the project's EbA and climate-resilient land management interventions.

2.1.5 Establish community management committees at selected intervention sites, building on existing structures, to coordinate community involvement in the implementation of EbA and climate-resilient land management interventions³⁴. Sub activities include:

- Establish sub-committees of community management committee focussed on elements of the management plan, such as: i) patrolling and monitoring area to prevent anti-illegal harvesting; and ii) waste management; and iii) water quality.

2.1.6 Liaise with the community management committees and other community members to verify sites for EbA interventions, including *inter alia* mangrove rehabilitation, wetland rehabilitation, and re-vegetation.

2.1.7 Implement wetland rehabilitation at Chiloango River mouth (Cabinda Province). Sub-activities include:

- Conduct an Environmental Impact Assessment, if required, for the proposed EbA and climate-resilient land rehabilitation activities in Chiloango.
- Establish a community-lead nursery for climate-resilient plant species identified in Activity 2.1.2.

³⁴ Community management committees are groups of between five and ten community members that consult the broader community on issues related to project implementation. Where practical, these committees will build on existing community groups. Ideally, once established, they should continue meeting beyond the duration of LDCF resources.

- Rehabilitate 400 hectares of degraded wetland (including mangroves) in Chiloango using labour from local communities.
- Undertake a baseline assessment of the wetland ecosystem and create a cost effective strategy for its rehabilitation in consultation with the community management committee.
- Rehabilitate the wetland using workers from local communities. Activities will include *inter alia*: i) digging of new water channels; ii) clearing of existing water channels; and iii) planting with climate-resilient species to stabilise banks.

2.1.8 Implement wetland rehabilitation in Barra do Dande (Bengo Province). Sub-activities include:

- Conduct an Environmental Impact Assessment, if required, for the proposed EbA and climate-resilient land rehabilitation activities in Barro do Dande.
- Establish a community-lead nursery for climate-resilient plant species identified in Activity 2.1.2.
- Rehabilitate 10 hectares of degraded wetland (including mangroves) in Barra do Dande using labour from local communities.

2.1.9 Implement wetland rehabilitation at Longa River mouth (Kwanza Sul Province). Sub-activities include:

- Conduct an Environmental Impact Assessment, if required, for the proposed EbA and climate-resilient land rehabilitation activities in Longa.
- Establish a community-led nursery for climate-resilient plant species identified in Activity 2.1.2.
- Rehabilitate 41 hectares of degraded wetland (including mangroves) in Longa using labour from local and nearby communities.
- Assess the wetland ecosystem and create a cost effective strategy for its rehabilitation in consultation with the community management committee.
- Rehabilitate the wetland and riverine area using workers from local communities. Activities will include *inter alia*: i) digging of new water channels; ii) clearing of existing water channels; and iii) planting with climate-resilient species to stabilise river banks.

2.1.10 Implement wetland rehabilitation at Bero River mouth (Namibe Province). Sub-activities include:

- Conduct an Environmental Impact Assessment, if required, for the proposed EbA and climate-resilient land rehabilitation activities in Bero.
- Assess the estuary, wetland and river ecosystem and create a cost effective strategy for its rehabilitation in consultation with the community management committee.
- Rehabilitate 110 hectares of wetland (including riverine and estuarine) areas using workers from local communities. Activities will include *inter alia*: i) digging of new water channels; ii) clearing of existing water channels; and iii) planting with climate-resilient species to stabilise river banks.
- Rehabilitate estuarine areas using workers from local communities. Activities will include *inter alia* digging of new water channels, clearing of silt and sediment, removal of litter and detritus.

2.1.11 Develop and implement community-based EbA intervention management plans. Sub-activities include:

- Engage with upstream water users in agriculture and petroleum sector to share the management plan and educate them on the negative effects of chemicals on local

ecosystems and the benefits of EbA, with reference to water quality data gathered by the water quality sub-committee.

Output 2.2: Climate-resilient land management techniques appropriate to local conditions demonstrated in selected communities in Chiloango, Barra do Dande, Longa and Bero.

The activities to be implemented under Output 2.2 are:

2.2.1 Identify, in collaboration with local communities, appropriate climate-resilient land management techniques to be implemented in each pilot intervention site.

2.2.2 Establish demonstration plots at each project intervention site to demonstrate climate-resilient land management techniques.

2.2.3 Implement a range of climate-resilient land management interventions identified in Activity 2.3.1 within and around pilot communities. This will include *inter alia*: i) climate-resilient agriculture crops and techniques; ii) waste management interventions to promote ecosystem and human health; and iii) subsistence hunting and harvesting practices to promote sustainable livelihoods under climate change.

Output 2.3: Pilot communities trained on EbA, climate-resilient land management and early warning response plans.

The activities to be implemented under Output 2.3 are:

2.3.1 Develop and/or adapt training programmes for local communities on: i) the benefits of EbA; and ii) implementing, maintaining and monitoring both EbA interventions and climate-resilient agricultural techniques; and iii) early warning response plans. Training on early warning response plans will be based in the response plans developed under Activity 1.2.6.

2.3.2 Train local government representatives on EbA and climate-resilient land management techniques.

2.3.3 Train community management committees to oversee and coordinate local community involvement in the implementation of EbA and climate-resilient land management interventions.

2.3.4 Train community management committees and local community members on early warning response plans developed in Activity 1.2.6.

2.3.5 Train local communities at each project intervention site on the implementation and maintenance of EbA interventions and climate-resilient land management techniques.

2.3.6 Host four experience-sharing events where people from nearby communities are brought to the demonstration plots established under Activity 2.2.2 and trained on climate-resilient land management techniques. Sub activities include:

- Establish an education programme in local schools on the benefits of EbA.

Output 2.4: EbA project concept notes developed for private sector upscaling of EbA interventions.

The activities to be implemented under Output 2.4 are:

2.4.1. Design a long-term strategy to monitor the socio-economic and bio-physical impacts of EbA interventions.

2.4.2. Implement the monitoring strategy designed in Activity 2.2.1 to assess the impacts of EbA to provide lessons learned and best practices for upscaling EbA.

2.4.3 Collate lessons learned and best practices generated through Outcome 2 and from other national/international projects on: i) EbA interventions; ii) climate-resilient land management techniques; iii) the social and environmental benefits of these approaches; and iv) community management structures for the implementation and maintenance of these interventions.

2.4.4 Develop EbA project concept notes for private sector upscaling of EbA interventions.

2.4.5 Engage with the private sector through relevant forums to disseminate EbA project concept notes and raise awareness about the CSI benefits of such projects. Engagements will be through presentations and related discussions within relevant forums, including the Petroleum Industry Steering Committee.

COMPONENT 3: Enhanced institutional coordination and capacity for proactive adaptation in Angola.

LDCF: US\$ 978,000

Co-financing amounts for Outcome 3: US\$2,850,000

Implementing Agency: UNDP

Without LDCF/SCCF Intervention (baseline)

97. In Angola, the policies related to management of natural resources and ecosystems – such as the PNFFSAC – do not include consideration of the current and predicted impacts of climate change. Additionally, the strategies and plans related to coastal planning and ecosystem management – such as the Coastal Zone Master Plan – do not include consideration of potential adaptation measures such as EbA. This is partly because there is inadequate data and information to support a detailed understanding of the impacts of climate change at a sectoral level, or to motivate for increased allocation of budget to support climate change adaptation activities. For example, no analysis has been conducted for the fishery, agriculture, energy, water or tourism industries on: i) the current and future impacts of climate change on each sector; and ii) the relative cost of different adaptation options. This information is important to guide strategic planning and decision-making and inform the integration of adaptation into sectoral budgets.

98. Currently, MINAMB, through the GAC, is responsible for the overall coordination of projects and programmes related to climate change. Strategic oversight related to climate change in different economic sectors is the responsibility of the CIBAC. This commission is chaired by the Minister of Environment and includes, amongst others, ministers from the MININT and MINEA. However, the CIBAC currently does not meet on a regular basis. This is partly because the Secretariat of CIBAC is currently constituted on an *ad hoc* basis by technical staff from various member ministries, depending on the particular advice required by members. This has resulted in inefficiencies in the administration of the forum such as irregularity of meetings, poor coordination of inputs and inadequate follow-up of actions tabled at meetings.

Consequently, the inefficient institutional arrangements and lack of information related to climate change risk and vulnerability is a barrier to effective coordination between Angola's important economic sectors.

99. At an inter-sectoral level, there is a need to increase public awareness of the predicted effects of climate change, as well as potential adaptation options such as EbA. There is currently no central source of information about adaptation for the general public or specific sectors. Although some useful public documents related to national adaptation options and awareness-raising have been generated, these documents are often not publicly available or shared between government departments. An adaptation e-library is needed to support information-sharing between government stakeholders and promote a wider understanding of important adaptation concepts and techniques.

100. At the local level, there is limited awareness and knowledge within communities living in the Cabinda, Bengo, Kwanza Sul and Namibe Provinces about the existence, predictions and causes of climate change. In particular, there is little understanding of the linkages between climate change and the increased frequency of events such as flooding. Coastal communities living in these provinces also have limited awareness of practices that would increase their resilience to climate change. Consequently, there is a need to increase the awareness of rural households on the topic of climate change.

Component 3 baseline projects

101. The Angola Water Sector Institutional Project (PDISA) 2010–2019 (US\$113.4 million) is financed by the International Development Association (IDA) (US\$57.4 million) and the Southern African Development Community (US\$56 million). This project will be implemented through the MINEA and its National Directorate for Water Supply and Sanitation (DNAAS). PDISA is strengthening the institutional capacity and efficiency of agencies in the water sector to improve access and reliability of water service delivery. Inadequate storm water drainage and the lack of adequate sanitation results in frequent occurrence of water-borne diseases and shortfalls in fresh water supply in many inland and coastal cities. The objective of the project is therefore to improve the quality and sustainability of urban water supply and sanitation services in urban centres. The project is comprised of four components, including: i) development of institutions in the water supply and sanitation sub-sector; ii) water resources management; iii) rehabilitation of water supply systems; and iv) capacity building and change management to strengthen the ability of government to improve water supply. Activities under PDISA include *inter alia* the rehabilitation of selected urban water supply systems and investments in improved access and reliability of water service delivery.

102. The sectoral vulnerability assessment undertaken under Outcome 2 of the LDCF-financed project will be used to generate detailed information about the climate change risks faced by the Angolan water sector in the coastal zone. This analysis will include the predicted effects of climate change on *inter alia*: i) water provision to coastal settlements; ii) ground and surface water availability; iii) water-related diseases such as malaria and cholera; and iv) water infrastructure along the coast. This vulnerability assessment will include recommendations for cost-effective adaptation interventions appropriate to the water sector and applicable to the aims of PDISA.

103. To further enhance the water sector's understanding of adaptation, economic assessments will be undertaken under Outcome 3. These assessments will build on the sectoral vulnerability assessments and will demonstrate: i) the economic cost of current and future

climate change to the water sector; and ii) the relative costs of different adaptation alternatives. Additionally, under Output 3.1, CIBAC representatives from the water sector will be trained on: i) how to interpret climate change adaptation investment appraisals; ii) how to use cost effectiveness rationales[for the planning and decision making process; and iii) the importance of mainstreaming climate change adaptation into regional, national and sectoral development plans for the water sector. Additionally, the overall improved functioning of CIBAC – promoted under Outcome 3 – will support the long-term climate-proofing of the water sector through improved inter-sectoral coordination for adaptation.

104. In summary, LDCF resources will add value to the institutional capacity building interventions of the PDISA project by promoting an in-depth understanding of the effects – and related costs – of current and future climate change on the water sector. This improved understanding will support agencies in the water sector to improve access and reliability of water service delivery, even under conditions of climate change. The PDISA will contribute co-financing of at least US\$3,000,000 to this LDCF project.

With LDCF/SCCF Intervention (adaptation alternative)

105. At present, the cost of climate change at a sectoral level is not well understood and the economic rationale for climate change adaptation along the Angolan coast has not been developed. Consequently, climate change is not adequately integrated into national policies, or into the plans and budgets of vulnerable economic sectors in Angola. To address this gap, an economic assessment will be conducted under Outcome 3 to quantify the economic impacts of climate change on Angola's coastal zone, disaggregated by sector. Specifically, these studies will demonstrate the cost-effectiveness of adaptation by establishing the relative cost of various adaptation responses. Based on these economic studies, cost-effective adaptation interventions for coastal areas will be recommended. The results of economic assessments will be disseminated to members of CIBAC, thereby raising awareness amongst government officials in CIBAC's member ministries of the need to plan for climate change adaptation. Policy briefs will be produced to guide the integration of climate change adaptation interventions – including EbA – into relevant policies, sectoral plans and budgets.

106. Building on the economic assessment and policy briefs, as well as the vulnerability assessments produced under Outcome 2, a coastal zone adaptation plan will be developed. This plan will build on the existing Coastal Zone Master Plan. CIBAC members and technical staff will be consulted in the development process to ensure that the coastal zone adaptation plan addresses specific sectoral concerns and supports national development objectives. This consultative approach will support the mainstreaming of the coastal zone adaptation plan into relevant sectoral, regional and national development plans and related budgets.

107. LDCF resources will also be used to implement interventions to improve the technical functioning of the CIBAC, and thus promote inter-ministerial coordination on adaptation in Angola. An assessment will be undertaken to identify gaps in, as well as provide recommendations to strengthen, the capacity of the Secretariat of CIBAC, technical staff of member ministries, and the GAC to coordinate climate change actions. Additionally, operational and technical support will be provided to the Secretariat of CIBAC to: i) arrange regular meetings; ii) prepare agendas and contents for meetings; iii) advocate for the inclusion of climate change considerations in relevant strategies and plans based on identification of cost-effective adaptation options; and iv) raise awareness about climate change effects in the coastal zone of Angola. Moreover, technical guidelines and training will be provided to the Secretariat of CIBAC, technical staff of member ministries, and the GAC on mainstreaming adaptation into

regional, national and sectoral development plans. An international Technical Advisor will be hired to provide technical guidance related to Component 3 of the project. As described under the Management Arrangements in Section 5, the Technical Advisor will also be responsible for supporting complementarities and programmatic synergies between this project and the Cuvelai project in developing national-level capacity for climate change adaptation in Angola.

108. LDCF resources will also make it possible for the MoE to procure technical support to the Secretariat of the CIBAC and for implementation of the National Adaptation Plan (NAP) roadmap. The NAP Global Support Programme (NAP-GSP) is currently assisting the GoA to create a NAP roadmap for Angola. A national-level training on the roadmap process was held in April 2015, but the roadmap has not yet been finalised. Support for the NAP roadmap will be required – probably in the form of training or technical input – but the actual needs of the programme are still unclear. Consequently, the nature of the support that LDCF resources will provide used for implementing the roadmap will be decided on during the project inception phase.

109. Under Outcome 4 (overseen by UNDP), awareness-raising interventions will be undertaken to promote an increased understanding of climate change and adaptation at a national, sectoral and local level. Awareness-raising activities targeting the private sector will be undertaken to share cost-effective adaptation interventions identified in Outcome 3, and to promote the EbA project concept notes produced under Outcome 2. Additionally, information-sharing mechanisms will be put in place to promote inter-ministerial collaboration on climate change and adaptation, as detailed in Outcome 4. The Project Management Unit will establish and maintain a climate change e-library – and associated mechanisms of information sharing – as part of the MINAMB website. This e-library will include open-source adaptation materials, including *inter alia*: i) lessons learned and publications of the project ii) academic research and papers produced by national universities; and iii) other relevant publications including lessons learned from EbA projects outside Angola. In addition to specific documents, there will be a section with different links to other online adaptation libraries of NGOs and other LDCs. The e-library will support information sharing between CIBAC members and other government ministries. Additionally, it will be accessible to the general public, including students from national universities and members of the private sector. Consequently, the e-library will promote information sharing and public/private collaboration on climate change and adaptation in Angola.

OUTCOME 3: Increased inter-ministerial coordination and institutional capacity to adapt to climate change in Angola.

Output 3.1: Technical support and training provided to the Secretariat of the Inter-ministerial Committee for Biodiversity and Climate Change (CIBAC) and Climate Change Cabinet (GAC).

The activities to be implemented under Output 3.1 are:

3.1.1 Conduct a gap assessment of the technical capacity of the Secretariat of CIBAC, technical staff of member ministries, and the GAC for: i) information-sharing; and ii) coordinating the climate change agenda.

3.1.2 Propose recommendations to clarify/improve the functioning of the Secretariat of the CIBAC, supporting it to operationalise the commission's mandate.

3.1.3 Provide operational and technical support to the Secretariat of CIBAC to: i) arrange regular meetings of the CIBAC; ii) prepare agendas and contents for meetings; iii) advocate for the inclusion of climate change considerations in relevant strategies and plans using a cost effectiveness argument; and iv) raise awareness about climate change effects in the coastal zone of Angola.

3.1.4 Provide technical support to the Secretariat of CIBAC and GAC for the NAP process in Angola, to support implementation of the NAP roadmap.

3.1.5 Conduct training sessions for the Secretariat of CIBAC, technical staff of member ministries, and the GAC on: i) interpreting climate change adaptation economic assessments produced under Activity 3.2.1; ii) using a cost effectiveness argument in the planning and decision making process and; iii) mainstreaming adaptation into regional, national and sectoral development plans and budgets.

Output 3.2: Policy briefs and technical guidelines produced to support the integration of climate change adaptation into relevant policies and plans, including their related budgets.

The activities to be implemented under Output 3.2 are:

3.2.1 Undertake and present assessments of the economic impacts of climate change on Angola's coastal zone, disaggregated by sector, to raise awareness about the need for climate change adaptation to be integrated into relevant policies/plans and related budgets. Sub-activities include:

- Identify cost-effective adaptation interventions, based on the results of the vulnerability assessment produced under Output 1.1, for coastal areas. This process will include the following process: i) a cost effectiveness assessment of the different adaptation options per sector; and ii) recommendations to decision makers within the various sectors of the most cost effective adaptation option.

3.2.2 Identify entry points at the national and provincial level for the integration of climate change adaptation interventions, including EbA, into relevant policies and sectoral budgets and propose policy revisions. Sub-activities include:

- Develop policy briefs that identify entry points at the national and provincial level for the integration of climate change adaptation interventions, including EbA, into relevant policies and sectoral budgets and propose policy revisions.
- Present economic assessments and policy briefs to sectoral ministries.

3.2.3 Develop a coastal zone adaptation plan and integrate adaptation interventions into relevant sectoral, regional and national development plans.

3.2.4 Develop and/or adapt technical guidelines – in English and Portuguese – for GAC, sectoral ministries (including *inter alia* fisheries, agriculture, transport, energy, water and tourism) and the CIBAC on how to assess, plan and finance climate change adaptation interventions, and integrate into the sectoral and national budgeting processes.

Outcome 4: Improved awareness about climate change impacts and adaptation among non-governmental stakeholders.

Output 4.1: Public awareness programme undertaken to inform non-governmental stakeholders including NGOs, academia and private sector about climate risks and adaptation.

The activities to be implemented under Output 4.1 are:

4.1.1 Design and implement awareness-raising campaigns for NGOs, relevant private sector stakeholders, academic institutions and the general public on: i) climate change impacts on the coastal zone; ii) potential climate change adaptation interventions; and iii) the benefits of EbA for increasing the resilience of livelihoods and communities to climate change. Sub activities include:

- Hold workshops to share the results of the vulnerability and economic analysis with relevant industries, including petroleum, fisheries, agriculture and mining. At these workshops, community members from the project sites will be invited to report on their experiences of EbA and climate-resilient land management. Additionally, a short film documenting the restoration process will be shown to promote investment in the EbA concept notes.

4.1.2 Collect, codify and disseminate lessons learned and knowledge generated through LDCF resources to appropriate national and regional networks, such as AAKNET. Sub activities include:

- Establish and maintain a climate change e-library – and associated relationships of information sharing – as part of the MINAMB website of open-source adaptation materials, including *inter alia*: i) lessons learned and publications of the LDCF-financed project; ii) academic research and papers produced by national universities; and iii) other relevant publications.

4.1.3 Arrange for national consultants hired through the project to present the findings of their assessments or studies – including results of coastal vulnerability and economic assessments – at local academic institutions.

2.4. Key indicators, risks and assumptions

Please see the Results Framework in Section 3 for details of the project indicators.

Risk analysis and risk management measures

110. A participatory approach was adopted during the PPG phase of the LDCF-financed project. This included the consultation of various stakeholders, national workshops and meeting with the project steering committee (see Annex 2). This approach will be continued throughout project implementation. LDCF resources will therefore have strong support from coastal communities and government. Monitoring, re-assessing and updating the project risks will be an important task of the TA and the project manager throughout project implementation. Table 1 below describes the risks that have been identified, their associated impacts and countermeasures.

Table 1. Risk matrix

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
National level risks						
1	Institutional capacity and relationships between line ministries are not sufficient to provide effective solutions to climate problems that are complex and multi-sectoral.	Multi-sectoral adaptation interventions are compromised and interventions are confined to those sectors willing to engage in cross-sectoral dialogue. The vulnerability of certain sectors and Angola as a whole to climate change is not fully addressed.	Medium	<ul style="list-style-type: none"> • Develop technical capacity of the CIBAC to support inter-ministerial coordination and planning around climate change adaptation. • Ensure technical representatives from all line ministries are included in the training provided to the secretariat of the CIBAC. This will increase institutional capacity within, and facilitate coordination between different ministries. • Produce sectoral vulnerability assessments for different line ministries to promote support for the LDCF project activities. 	Institutional	P= 3 I= 4
2	Long- and medium-term climate change adaptation priorities undermined by national emergencies or civil unrest.	Project activities are interrupted. Natural and financial capital is lost.	Medium	<ul style="list-style-type: none"> • The project manager and TA will keep abreast of national events and politics to ensure knowledge of any potential disruption to project activities at intervention sites. This to allow for the timely implementation of contingency plans. Should civil unrest/national emergencies be 	Social, environmental	P= 1 I= 4

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				deemed by the project manager and TA to be a direct threat to project activities at implementation sites, alternative project sites identified during the PPG phase will be considered.		
3	National financial instability due to high dependence on oil prices	Climate integration into national budgets are undermined by several cuttings in national budgets	High	<ul style="list-style-type: none"> Strengthen advocacy efforts focused on long- and medium-term economic benefits on integration of adaptation options into national budgets and communicate these to policymakers throughout. Engage with the private-sector through EbA project concept notes to promote investments outside of the national budget to sustain and upscale climate change adaptation interventions. 	Economic, Political	P= 2 I= 3
4	Unclear land tenure reduces the sustainability of EbA and climate-resilient land restoration interventions.	Communities degrade restored land as they consider it individually owned.	Low	<ul style="list-style-type: none"> Land that will be restored is owned by the state. The project will raise community awareness of this through training of local communities. Ensure technical representatives from all line ministries are included in the training provided to the secretariat of the CIBAC. This will increase institutional capacity within, and facilitate 	Political	P= 1 I= 4

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				coordination between different ministries, ensuring that different ministries do not plan to use restored land for alternative purposes.		
Local level risks						
5	Current climate and seasonal variability and/or hazard events prevent implementation of planned activities.	Economic loss or physical damage to infrastructure delays implementation of project activities.	Medium	<ul style="list-style-type: none"> • Meteorological predictions and seasonal variability at each site will be used to inform the selection of climate-resilient species and techniques to: i) assist plant growth particularly in the seedling/sapling phase; and ii) reduce risk of damage from climate-induced natural hazards. • Intervention sites will be mapped to establish the extent to which they are vulnerable to specific natural hazards. This mapping will be used to inform restoration practices and techniques. • Select EWS equipment that is resilient to climate-related risks. 	Economic	P= 3 I= 3
6	Communities do not support interventions and do not adopt ecosystem management activities for adaptation during	Unsustainable use of natural resources continues, leading to further degradation of ecosystems.	Medium	<ul style="list-style-type: none"> • Co-develop community based management plans with coastal communities to guide management activities over time. • Implement alternative livelihoods that have been deemed financially, technically 	Social, environmental	P= 2 I= 3

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
	or after the LDCF project because of limited immediate benefits of EbA.	Climate-resilient land management techniques are not implemented in the long term. Consequently, communities continue to be vulnerable to climate-induced natural hazards.		<p>and socially viable/feasible to reduce reliance on intensive land use.</p> <ul style="list-style-type: none"> • Engage with community stakeholders through-out the project's implementation to strengthen their continued buy-in into the LDCF project. • Actively involve coastal communities in project implementation through <i>inter alia</i>: i) establishing community management committees; ii) liaising with the community management committees and other community members to identify intervention sites for EbA interventions; and iii) developing and implement community-based EbA intervention management plans. • Raise public awareness on the capacity of the restored ecosystems to increase community resilience to climate change. • Foster a bottom-up, grassroots approach throughout the project's development and implementation phases. • Improve capacity building and training of the communities to 		

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				<p>improve their understanding of the adaptation benefits of the EbA activities.</p> <ul style="list-style-type: none"> Implement activities that have direct benefits in addition to the ecosystem restoration interventions. 		
7	Lack of already established implementing partners at the local level and/or low capacity level for the implementation of local interventions	Low implementation rate; Low capacity of communities engagement;	Medium	<ul style="list-style-type: none"> A criteria for site selection during the PPG phase was the presence of suitable implementing partners at intervention sites, so this risk has been significantly minimized. If local implementing partners are unable to deliver results timeously, national NGOs or partners, such as Development Workshop or ADRA, will be engaged to coordinate project interventions at the project sites. 	Technical	
8	Priority interventions implemented are not found to be cost effective.	Project interventions are not upscaled for large-scale EbA programmes.	Low	<ul style="list-style-type: none"> Use cost effectiveness as a core principle in the implementation of adaptation measures (EbA and EWS). Record detailed information on cost effectiveness. Such information will be widely disseminated for use by future projects and research. 	Economic	P= 1 I= 3
9	Baseline project activities not	The LDCF project activities	Medium	<ul style="list-style-type: none"> Design activities that build on baseline projects but do not 	Economic	P= 3 I= 2

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
	achieved as planned.	are compromised as a result of a lack of existing interventions upon which to build.		depend entirely on the success of the baseline projects. The activities to be implemented within the LDCF project are designed to be beneficial to the coastal communities even if they are implemented alone.		
10	Large-scale infrastructure development – such as the Port near Barro do Dande – takes place within project areas.	Project activities are disrupted or delayed.	Medium	<ul style="list-style-type: none"> • The project manager and TA will work with appropriate governmental agencies to ensure prioritisation of the LDCF project in the project areas. • The PMU will coordinate with other line ministries to ensure that they are up to date on the location of planned infrastructure development. • A port is to be constructed near Barro do Dande (see site reports in Appendix 15 in UNEP PD for further details). Based on stakeholder consultations, the port construction will be geographically removed from the LDCF project intervention sites. However, the PMU will keep track of plans for the port development and if, during the inception phase, the construction of the port is deemed to have a high risk of negatively impacting on the 	Institutional	P= 3 I= 4

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				project activities then an alternative site may be selected.		
11	Uncontrolled settlements into the natural ecosystems.	The restoration activities are unsustainable.	High	<ul style="list-style-type: none"> • Raise awareness of the national and local government on this potential risk, with a focus on coastal sectors. • Raise awareness of communities on the benefits of restored natural ecosystems for adaptation and their livelihoods. • Maximise the economic benefits from sustainable natural resource management. 	Social, environmental	P= 4 I= 4
12	Theft and vandalism of early warning and climate monitoring equipment.	The reliability of weather reports, forecasts, and early warnings will be compromised in pilot areas if a significant proportion of infrastructure is no longer functional.	Medium	<ul style="list-style-type: none"> • Hold public awareness workshops to sensitise communities on the importance of EWS infrastructure. • Involve local stakeholders in the maintenance of equipment and the collection of data. • Install fencing around equipment in high risk areas. 	Social Technical	P= 1 I= 4

2.5. Cost-effectiveness

111. LDCF resources has been designed to be used on activities with an inherently cost-effective approach. In particular, the project objective will: i) promote integration of climate change adaptation into development planning; and ii) enhance the resilience of communities to climate change. Cost-effective interventions that have been selected during the PPG include *inter alia*: i) establishing a pilot EWS in Barra do Dande; ii) implementing EbA and complimentary climate-resilient land management interventions in Chiloango, Barra do Dande, Longa and Bero; iii) creating EbA project concept notes to promote upscaling of EbA by the private sector; and iv) conducting a range of training and awareness-raising activities for relevant stakeholders. During the process of selecting these interventions, alternative approaches for reducing climate vulnerability of local communities at project intervention sites in Angola were considered. An evaluation of their cost-effectiveness vis-à-vis that of interventions proposed in Section 2.3 is described below.

112. Importantly, the LDCF-financed project include technical training for coastal community members on implementing, maintaining and monitoring project interventions. This approach will reduce the overall cost for monitoring project activities. Moreover, it will promote sustainability of the interventions beyond the lifespan of the project.

Table 2. Analysis of project cost-effectiveness of adaptation alternatives

LDCF project interventions are implemented	Alternative 1	Alternative 2
<i>Outcome 1: Strengthened technical capacity of government staff at local and national level to analyse, predict and respond to climate change effects, access policy-relevant data and deliver relevant information to local communities</i>		
<u>EWS is designed for Barra do Dande and piloted in this village.</u> Evidence suggests that investments in EWS for disaster prevention are more cost-effective than spending on disaster relief ³⁵ . In developed countries, the cost of damage from extreme weather events is estimated to be more than 10 times the cost of improved weather services to generate warnings ³⁶ . The total benefits of investments in EWS and climate information are expected to be proportional to: i) the size of the affected population; ii) level of risk; and iii) exposure and vulnerability of infrastructure to climate-related hazards. Considering the density of vulnerable populations that live along the coast of Angola, these cost-benefits of EWS are likely to be greater than the estimated	<u>No improvements are made to the national EWS</u> Without a functional EWS, local communities and associated livelihoods and assets will remain vulnerable to the negative effects of climate change. Flooding in Barra do Dande is already negatively affecting local communities, and the risk of another extreme flood event at the river mouth will continue to increase with climate-related rainfall variability in the future. Extreme flood events have occurred in other parts of Bego Province ³⁷ . For example, in March 2005, the city of Dondo and surrounding areas experienced	<u>National-level ("blanket") capacity building is implemented to improve the national EWS</u> Although stakeholders from INAMET and CNPCB would benefit from national training on hydrological monitoring, forecasting and warning dissemination, this approach

³⁵Healy, A. and Malhotra, N. 2009. Myopic Voters and Natural Disaster Policy. *The American Political Science Review* 103(3): 387-406.

³⁶Tsirkunov, V. and Rogers, D. 2010. Costs and benefits of early warning systems. Global Assessment report on Disaster Risk Reduction. The World Bank.

³⁷ IFRC. 2005. Angola: Flood Interim Final Report. <http://www.ifrc.org/docs/appeals/05/05ME016ifr.pdf>

figure for developed countries. Improved access to climate information will also maximise opportunities under conditions of climate change. In particular, agriculture and fisheries sectors can use this type of data to undertake planning that promotes increased productivity.	heavy rains that caused overflowing of Kapacala and Kwanza Norte rivers. This resulted in flooding that caused damage to housing, agriculture and communication systems. Approximately ~1,800 buildings (including schools) were completely destroyed and a further 1,200 buildings were badly damaged. The GoA had to provide helicopters to assist in the evacuation of people stranded in the flooded areas, adding to the costs of flood remediation.	would be costly. Moreover, training of national stakeholders without designing village-specific EWS – that assesses the most effective means of disseminating early warnings to local communities – would undermine the effectiveness of end-to-end EWS.
<i>Outcome 2: EbA technologies and climate-resilient land management techniques transferred to coastal communities in Angola to reduce their vulnerability to droughts, rainfall variability, and extreme events</i>		
<u>EbA and climate-resilient land management interventions are piloted in Chiloango, Barra do Dande, Longa and Bero</u> Ecosystems – including mangroves, wetland and estuaries – facilitate human adaption to climate change by acting as buffers and providing services ³⁸ . The main benefit of mangrove and wetland restoration is reduced income wave and tidal energy through enhanced tidal dissipation in the intertidal zone ³⁹ . Moreover, these ecosystems are capable of undergoing “autonomous” adaptation to SLR through accumulation of sediments. In addition, wetland and restoration provide multiple social and ecological benefits including: i) maintenance of soil fertility; ii) carbon sequestration; and iii) biodiversity and habitat restoration. In the long-term, these benefits will contribute to climate change mitigation. Therefore, EbA is a ‘soft’ proactive rather than reactive approach for	<u>Implementation of exclusively hard adaption measures for flood risk management</u> In some cases, initiatives have focused on constructing hard infrastructure ⁴⁰ to protect local communities from climate-related hazards. Hard infrastructure (i.e. protection approaches) along the coast of Angola could include <i>inter alia</i> sea walls, sea dykes or groynes. These items would provide physical barriers against climate-related hazards and would reduce beach erosion. However, the cost of construction of this infrastructure is much greater than EbA. For example, the unit cost of constructing 1 km of vertical seawall is estimated to be between US\$ 0.4-27.5 million ⁴¹ .	<u>Relocation of communities living in environmentally high-risk areas</u> There is a risk that economic, environmental and social costs could be incurred through relocating local communities. For example, relocation to new sites could result in lost livelihoods, lost sense of community and social capital, cultural alienation. In

³⁸ Jones et al. 2012. Harnessing nature to help people adapt to climate change. *Nature*. Published online: 26 June 2012. DOI: 10.1038/nclimate1463

³⁹ Linham, M. and Nicholls, R. 2010. Technologies for climate change adaptation: coastal erosion and flooding. TNA Guidebook Series.

⁴⁰ including sea walls, irrigation infrastructure and dams

⁴¹ IBID

addressing climate change. A growing body of scientific research indicates that increasing numbers of EbA projects will deliver favourable cost-benefit ratios in comparison with projects that use only hard interventions to facilitate adaptation to climate change.		some cases, relocation has increased the rate of poverty of the relocated community because of these aforementioned social costs ⁴² .
<u>EbA concept notes are developed and presented to the private sector</u> By developing and presenting EbA concept to the private sector, upscaling and replication of this approach will be promoted. Recently, it has been acknowledged that public- and donor-funded adaptation is not sufficient to meet the pressing needs of climate-vulnerable communities and sectors ⁴³ . Therefore, a mix of funding sources for adaptation – including the private – is the most cost-effective solution in the long term.	<u>EbA interventions are upscaled through public-sector or international donor funding</u> In line with the National Adaptation Planning (NAP) process that was initiated at COP-16 (Cancun), there is a need for countries to move from immediate, isolated and project-driven adaptation to a more integrated approach that supports long-term, sustainable economic development. To advance this process, the GoA should to promote innovative financing mechanisms for adaptation. By only implementing public-sector or donor-funded adaptation, this process will be undermined.	N/A
<i>Outcome 3: Increased inter-ministerial coordination and institutional capacity to adapt to climate change in Angola</i>		
<u>Capacity of line ministries is strengthened to plan and implement EbA and improve EWS</u> Strengthened institutional and technical capacity of climate-vulnerable line sectors will promote sustained adaptation to climate change in Angola. In particular, through training government officials from a number of relevant line ministries, a “diffusion” effect will be promoted within these ministries, whereby knowledge and skills for climate change adaptation are transferred to staff members outside of the training sessions. This is a cost effective approach to strengthening national and inter-ministerial capacity for adaption.	<u>A new inter-ministerial forum for climate change adaptation is established</u> By establishing a dedicated inter-ministerial forum for climate change, knowledge and skills for adaptation would remain isolated within a particular group of people. This would not be a cost-effective and sustainable approach to climate change adaptation in Angola. Moreover, the move towards an integrated approach to adaptation would be undermined. To establish an effective forum, a	N/A

⁴² World Bank. 2010. Safer homes, stronger communities: a handbook for reconstructing after natural disasters. DOI: 10.1596/978-0-8213-8045-1. Accessed on 10 April 2015.

⁴³ SEI. 2008. Private sector finance and climate change adaptation policy brief. Available online at: <http://www.sei-international.org/mediamanager/documents/Publications/Climate-mitigation-adaptation/policybrief-privatesectorfinance-adaptation.pdf>. Accessed on 5 April 2015.

	framework for the forum would need to be established, and forum members would need to be trained. The costs of these activities would be greater than training government representatives that would remain within – and transfer knowledge and skills to – existing ministries.	
<i>Outcome 4: Improved awareness about climate change impacts and adaptation among non-governmental stakeholders</i>		
<u>A national awareness campaign on climate change adaptation – including EbA – is implemented</u> By implementing a national awareness for adaption to climate change, information on the effects of climate change and adaptation options will be disseminated to the general public including local communities, NGOs, relevant private sector stakeholders and academic institutions. This is the most cost-effective approach for providing this type of information to the greatest number of stakeholders at a range of levels.	<u>A new online platform for adaptation planning in Angola – including EbA – is developed</u> To disseminate information on the effects of climate change and adaptation options, a number of initiatives have established online platforms such as web portals. Although this in an effective approach to provide information that is readily available and accessible, the target stakeholders are limited to those who can access the platform (e.g. stakeholders or academics that have access to the internet). Moreover, these types of platforms are generally costly to maintain and update, requiring technical expertise. For this reason, the platforms are seldom sustained beyond the lifespan of the project.	N/A

2.6. Sustainability

113. The project was developed through consultation with various stakeholders, including: i) central and local government representatives; ii) delegates of coastal economic sectors such as fisheries, agriculture, transport, energy, water and tourism; iii) NGO's; iv) UNEP and UNDP; and v) coastal communities (see site reports and inception report in Annex 2). Stakeholder consultations that were undertaken during the PPG phase and will be undertaken during project implementation (see Section 2.8 and 5) support the sustainability of interventions beyond the duration of the project by prioritising the long term needs of coastal communities and sectors.

114. The activities of the project include a strong emphasis on capacity-building, training and institutional strengthening, particularly with respect to climate change adaptation. Stakeholders that are targeted for inclusion in the project's capacity-building activities include representatives of local and national government, the private sector, NGOs and academia. It is anticipated that the LDCF investments in strengthening the capacity of these stakeholders will support the

sustainability and effectiveness of similar ongoing and future projects in Angola. Further examples of the project's capacity-building activities are detailed further below.

115. Activities that will strengthen the **institutional and technical capacity for EWS in Angola, and adaptation interventions** will be undertaken by LDCF resources. This will be achieved by training relevant stakeholders on these approaches. Within Component 1, relevant representatives from CNPCB, INAMET, local government at project intervention sites and the Ministries of Environment, Fisheries, Tourism and Transport will be trained on the: i) interpretation of climate information; and ii) development of locally relevant climate forecasts and advisories (Output 1.1). As a result, these stakeholders will have strengthened capacity to improve the EWS in Angola during and beyond LDCF resources. In particular, this strengthened capacity will enable appropriate and timely responses to climate-related risks and implementation of appropriate adaptation interventions. Additionally, early warning response plans will be developed in consultation with communities at intervention sites, thereby supporting adaptation to climate-induced natural hazards. These communities will also be trained on planning, implementing and maintaining EbA and climate-resilient land management. As a result, these local stakeholders will have the capacity to sustain on-the-ground interventions after LDCF resources are terminated. Moreover, EbA will be designed to provide livelihood benefits for coastal communities, thereby promoting continued ownership amongst these stakeholders.

116. The proposed project will also **strengthen national expertise on climate change adaptation interventions and EbA** by prioritising the appointment of national consultants. International consultants will be appointed only where local expertise is limited. In such instances, national and international consultants will work together. As a result, of the collaboration between international and national consultants, the knowledge and capacity of the national consultants on international best practice for EbA and EWS will be developed and strengthened. This enhanced knowledge will promote national ownership of the project outcomes, thereby contributing to the overall sustainability of the project's benefits.

117. Within Component 3, programmes will be implemented to improve the awareness of the general public on EWS, climate change and appropriate interventions for adaptation. Moreover, information on lessons learned through activities implemented with LDCF resources will be disseminated through these programmes. Improved awareness of EbA and climate-resilient land management in Angola and benefits of the demonstrations that will be implemented within Component 2 will promote sustainability of these interventions.

118. Under Component 3, the strengthening of national capacities at the highest level of decision- policy-makers for the integration of climate change adaptation into relevant policies and plans will be the cornerstone for the sustainability.

119. With LDCF resources, research will be undertaken to inform, and strengthen the evidence base for, adaptation options in Angola. This research will include: i) vulnerability assessments – including adaptation options – under Outcome 1; ii) assessments on useful and climate-resilient species under Outcome 2; and iii) economic impact assessments under Outcome 3. The knowledge that is generated through this research will promote sustainability of project interventions. Moreover, this knowledge will inform the design of future adaptation interventions in Angola. Also, involvement of academia and students will potentially incentive new researches lines at the national level in those related areas.

120. Importantly, LDCF resources will benefit from the UN's previous experiences in Angola, particularly the GEF LDCF project – executed by UNDP – promoting climate-resilient development and enhanced adaptive capacity to withstand disaster risks in Angolan's Cuvelai River Basin. LDCF resources will build on the lessons learned from this project – and other initiatives for ecosystem restoration and management – to avoid pitfalls that have been experienced.

2.7. Replicability

121. LDCF financed interventions – and the benefits derived from these interventions – are designed to be replicable in other areas of Angola and in other LDCs within the region. To facilitate effective replication by Ministries such as MINAMB and MINAGRI, lessons learned and knowledge generated during the project implementation will be documented and disseminated through appropriate national and regional networks such as AAKNET (Output 4.1). Additionally, knowledge and awareness-raising activities will be undertaken to improve the understanding of climate change risks and adaptation among a variety of non-governmental stakeholders including NGOs, the private sector, academia and the general public. These activities will promote replication of interventions outside of project sites. Importantly, the project design is also aligned with national policies, strategies, and legislation for Angola (see Section 2.1), which will further facilitate replication.

122. The cost-effectiveness of EbA and climate-resilient land management will promote replication of these approaches amongst: i) vulnerable coastal communities who do not have access to financial capital; and ii) representatives of important economic sectors that will benefit from increased investments in EbA, such as the fisheries and agriculture sectors. Moreover, a participatory approach will be adopted throughout LDCF resources, thereby promoting ownership of interventions amongst local and national stakeholders. This ownership will support the integration of cost-effective adaptation interventions into: i) local planning (e.g. preparation of disaster response plans); and ii) sectoral strategies, budgets and plans.

123. Within Outputs 1.1 and 1.2, government staff will be trained to replicate climate change vulnerability assessments in areas outside of the project intervention sites. Moreover, under Output 2.1, protocols will be developed for EbA implementation. These protocols will incorporate lessons learned and best practices from: i) ongoing ecosystem restoration projects in Angola; and ii) other EbA projects in southern Africa. Importantly, these protocols will contribute to the technical knowledge base on EbA in Angola, thereby facilitating replication. These protocols will be designed for particular ecosystems (i.e. coastal forests, mangroves and wetlands). Consequently, they will promote the use of EbA in similar landscapes throughout Angola in the future.

124. Under Output 2.4, EbA project concept notes will be developed based on lessons learned through LDCF resources. These concept notes will provide information on: i) the corporate social benefits of this approach; and ii) step-by-step guidelines for implementing EbA including budget requirements and details of material suppliers. Thereafter, the LDCF-financed project will engage the private sector through forums – such as the Environment Fund – to disseminate these notes, thereby promoting public and private investment in EbA in areas near Chiloango, Barra do Dande, Longa and Bero,

2.8 Stakeholder involvement plan

125. The implementation strategy for the LDCF-financed project includes extensive stakeholder participation. Details of the stakeholder participation during the PPG phase are provided in Section 2.1.3. A stakeholder engagement plan for the implementation phase will be

developed during the project inception workshop. Stakeholders will be consulted throughout the implementation phase to: i) promote community understanding of the project's outcomes; ii) promote local community ownership of the project through engaging in planning, implementing and monitoring of the interventions; iii) communicate to the public in a consistent, supportive and effective manner; and iv) maximise complementation with other ongoing projects. CIBAC will act as forum for project managers from baseline projects and other ongoing initiatives to discuss and develop synergies between their projects and LDCF resources.

Table 3. Stakeholder participation per outcome.

Outcome	Output	Lead or coordinating institutions	Important stakeholders/ partners	Key responsibilities
1.Strengthened technical capacity of government staff at local and national level to analyse, predict and respond to climate change effects, access policy-relevant data and deliver relevant information to coastal communities.	1.1 A set of detailed sectoral and localised vulnerability assessments for Angola's coastal zone.	MINAMB	<ul style="list-style-type: none"> Climate change adaptation/ vulnerability consultancy National Industry Experts INAMET MINAMB (GAC) Sectoral ministries CNPCB Academia – Agostinho Neto University 	<ul style="list-style-type: none"> Undertaking coastal climate change vulnerability assessment and sector specific vulnerability assessments. Dissemination of vulnerability research within various national institutions.
	1.2 Operational EWS developed in a selected project intervention site.	MINAMB	<ul style="list-style-type: none"> International meteorological/ EWS specialist Training/ community engagement consultancy INAMET CNPCB INRH 	<p>Coordinating:</p> <ul style="list-style-type: none"> Implementation of operational EWS developed in a selected project intervention site. Training of decentralized CNPCB service providers, extension officers from CNPCB and other relevant local government representatives. Development of flood early warning response plans with pilot communities.
2. EbA technologies and climate-resilient land management	2.1 A suite of EbA interventions, appropriate to local	MINAMB	<ul style="list-style-type: none"> Implementing organisation International EbA/ land restoration 	<p>Overseeing:</p> <ul style="list-style-type: none"> EbA interventions in intervention sites. Establishment of community

Outcome	Output	Lead or coordinating institutions	Important stakeholders/ partners	Key responsibilities
techniques transferred to coastal communities in Angola to reduce their vulnerability to droughts, rainfall variability, and extreme events.	ecosystems, implemented in intervention sites in Chiloango, Barra do Dande, Longa and Bero.		<ul style="list-style-type: none"> expert Community engagement expert Academia – Agostinho Neto University Community management committees Local fishing cooperatives, NGO groups and religious organisations MINEA MINPES 	<p>management committees in pilot communities.</p> <ul style="list-style-type: none"> Development and implementation of community-based EbA intervention management plans.
	2.2 Climate-resilient land management appropriate to local conditions demonstrated in pilot communities in Chiloango, Barra do Dande, Longa and Bero.	MINAMB	<ul style="list-style-type: none"> Implementing organisations International EbA/ land restoration expert Community engagement expert Community management committees Local fishing cooperatives, NGO groups and religious organisations MINEA MINPES IDA 	<p>Overseeing:</p> <ul style="list-style-type: none"> Implementation of a range of climate-resilient land management interventions within and around pilot communities. Establishment of demonstration plots at each project intervention site
	2.3 Pilot communities trained on EbA, climate-resilient land management, and early warning response plans.	MINAMB	<ul style="list-style-type: none"> Community engagement expert Training Consultancy Implementing organisations Local fishing cooperatives, 	<p>Coordinating:</p> <ul style="list-style-type: none"> Training of coastal communities on: i) EbA and the benefits of this approach; ii) climate-resilient land management techniques; iii) methods to implement and maintain both EbA

Outcome	Output	Lead or coordinating institutions	Important stakeholders/ partners	Key responsibilities
			NGO groups and religious organisations <ul style="list-style-type: none"> • MINEA • MINPES • IDA 	interventions and climate-resilient land management; and iv) early warning response plans. <ul style="list-style-type: none"> • Hosting of experience-sharing events where people from nearby communities are trained on climate-resilient land management techniques.
	2.4 EbA project concept notes developed for private sector upscaling of EbA interventions.	MINAMB	<ul style="list-style-type: none"> • MINAMB (GAC) • MINPET • Implementing organisations 	Coordinating: <ul style="list-style-type: none"> • Developing of EbA project concept notes for private sector upscaling of EbA interventions. Implementing: <ul style="list-style-type: none"> • Engagements with the private sector through relevant forums – such as the Environmental Fund – to disseminate EbA project concept notes and raise awareness about the CSI benefits of such projects.
3. Increased inter-ministerial coordination and institutional capacity to adapt to climate change in Angola.	3.1 Technical support and training provided to the Secretariat of CIBAC and GAC to improve inter-ministerial coordination and institutional capacity of the CIBAC.	MINAMB	<ul style="list-style-type: none"> • Members of the CIBAC, including, but not limited to: MINAMB, MINAGRI, MINEA (INRH) and INAMET • Environmental economic/ policy expert • TA 	Overseeing: <ul style="list-style-type: none"> • Conducting of a gap assessment on the technical capacity, information-sharing mechanisms, institutional arrangements and coordination mechanisms of the CIBAC. • Provision of operational and technical support to the Secretariat of CIBAC
	3.2 Policy	MINAMB	<ul style="list-style-type: none"> • Environment 	Coordinating:

Outcome	Output	Lead or coordinating institutions	Important stakeholders/ partners	Key responsibilities
	briefs and technical guidelines produced to support the integration of climate change adaptation into relevant policies and plans, including their related budgets.		<ul style="list-style-type: none"> al economic/ policy expert • TA • MINAMB (GAC) • Sectoral Ministries (related to fisheries, agriculture, transport, energy, water and tourism) 	<ul style="list-style-type: none"> • Assessments of the economic impacts of climate change on Angola's coastal zone, disaggregated by sector • Development of policy briefs detailing the economic impacts of climate change in coastal areas, potential adaptation interventions.
4. Improved awareness about climate change impacts and adaptation among non-governmental stakeholders.	4.1 Public awareness programme undertaken to inform non-governmental stakeholders including NGOs, academia and private sector about climate risks and adaptation.	MINAMB	<ul style="list-style-type: none"> • Communications expert • TA • MINAMB • NGOs • Academia • Private sector 	<p>Overseeing:</p> <ul style="list-style-type: none"> • Awareness-raising campaigns for NGOs, relevant private sector stakeholders, academic institutions and the general public. • Disseminating lessons learned and knowledge generated through the project through appropriate national and regional networks, such as AAKNET.

3. Project Results Framework

<p>This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: By 2019, the environmental sustainability is strengthened through the improvement of management of energy, natural resources, access to green technology, climate change strategies, conservation of biodiversity, and systems and plans to reduce disasters and risks.</p>				
<p>Country Programme Outcome Indicators: <i>Indicator 4.2.</i> No. of national and provincial institutions capable of identifying and monitoring disasters and risks, and implementing the national contingency plan, 2014-2019.</p>				
<p>Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): Promote climate change adaptation</p>				
<p>Applicable SOF (e.g GEF) Strategic Objective and Program:</p> <ul style="list-style-type: none"> CCA-1, Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change CCA-2, Strengthen institutional and technical capacities for effective climate change adaptation CCA-3, Integrate climate change adaptation into relevant policies, plans and associated processes 				
<p>Applicable SOF (e.g. GEF) Expected Outcomes:</p> <p>Outcome 1.3: Climate-resilient technologies and practices adopted and scaled up.</p> <p>Outcome 2.1: Increased awareness of climate change impacts, vulnerability and -adaptation.</p> <p>Outcome 3.1: Institutional arrangements to lead, coordinate and support the integration of climate change adaptation into relevant policies, plans and associated processes established and strengthened.</p>				
<p>Applicable SOF (e.g .GEF) Outcome Indicators:</p> <p>Indicator 4: Extent of adoption of climate-resilient technologies/ practices.</p> <p>Indicator 5: Public awareness activities carried out and population reached.</p> <p>Indicator 11: Institutional arrangements to lead, coordinate and support the integration of climate change adaptation into relevant policies, plans and associated processes</p>				
	Indicator	Baseline	Target	Means of verification
Objective: To reduce vulnerability to climate change of national government and coastal communities along the coast of Angola.	1. Total number of direct beneficiaries (and % of which are women) of the project's EWS and EbA activities.	0	At least 2500 direct beneficiaries (50% of which are women), including: 750 ⁴⁴ beneficiaries of the EWS and 1800 ⁴⁵ beneficiaries of EbA and climate-resilient land management interventions.	Attendance registers from training sessions and training reports. Registers of community beneficiaries kept by the organisation implementing EbA and climate-resilient land-management interventions at each project site. Survey results and reports.

⁴⁴ There are 1540 people living in and around Barra do Dande, the site of the EWS installation. It is assumed that at least half of this population will benefit from the EWS.

⁴⁵ There are a total of 3678 people living in the four project intervention sites. It is assumed that at least half of this population will benefit from the project's EbA and climate-resilient land management interventions.

<p>Outcome 3. Increased inter-ministerial coordination and institutional capacity to adapt to climate change in Angola (overseen by UNDP).</p>	<p>1. Degree to which institutional capacity and arrangements to lead, coordinate and support the integration of climate change into relevant policies and plans is strengthened – for CIBAC and the CIBAC secretariat .</p>	<p>Current estimated level of overall institutional capacity is 4 (out of 10).</p> <p>CIBAC was established in 2012 to coordinate climate change at an inter-ministerial level. The committee is attended by Ministers of various climate-sensitive or relevant ministries and therefore includes some authority over sector-specific budget allocations. However, the Secretariat of CIBAC has not yet been properly constituted and does not have a clear mandate. The committee is therefore not functioning optimally and climate change adaptation has</p>	<p>CIBAC and the Secretariat of CIBAC has progressed by at least 3 steps in their institutional capacity and arrangements score assessment framework by the end of the project.</p>	<p>A scoring methodology as suggested by the GEF AMAT will be adopted. The scoring is based on five criteria expressed as questions (these criteria will be further validated at inception phase):</p> <ol style="list-style-type: none"> 1. Are there institutional arrangements in place to coordinate the integration of climate change adaptation into relevant policies, plans and associated processes for coastal areas? 2. Are those arrangements based on (a) clear and strong mandate(s) and supported by adequate budget allocations? 3. Do those arrangements include authority over the budgets of climate-sensitive sectors? 4. Do those arrangements include broad stakeholder participation across relevant, climate-sensitive sectors? 5. Are those arrangements effective, i.e. is climate change adaptation coordinated across key national and sectoral decision-making processes? <p>Each question is answered with an assessment and score for the extent to which the associated criterion has been met: not at all (= 0), partially (= 1) or to a large extent/ completely (= 2). An overall score is calculated, with a maximum score of 10 given five criteria.</p>
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		<p>not been fully integrated into sectoral strategies and plans.</p> <p>Baseline values to be verified during the baseline assessment using the AMAT score criteria. Quantitative assessment of the baseline for this indicator will be conducted at inception stage.</p>		
	2. Number of proposed revisions to integrate climate change into existing policies/strategies/plans included on the agenda of CIBAC meetings.	0 proposed revisions to integrate climate change into existing policies/strategies/plans have been included on the agenda of CIBAC to date.	2 proposed revisions to integrate climate change into existing policies/strategies/plans included on the agenda of CIBAC meetings by the end of the project.	Agendas of CIBAC meetings. Minutes of CIBAC meetings.
	3. Establishment of a permanent secretariat of CIBAC with a clearly defined role/mandate.	The secretariat of CIBAC is currently convened on an <i>ad hoc</i> basis. The composition of members varies and it does not have a clearly defined mandate.	A permanent secretariat of the CIBAC is established with a clearly defined role/mandate by the end of the project.	Agendas of CIBAC meetings. Minutes of CIBAC meetings. Review of mandate of the secretariat of the CIBAC.

	4. Assessment of the economic impacts of climate change on Angola's coastal zone, disaggregated by sector.	0 economic assessments of climate change impacts on Angola's coastal zone have been conducted.	An assessment of the economic impacts of climate change, disaggregated by sector, on Angola's coastal zone produced by the end of the project.	Review of economic assessment produced.
Outcome 4. Improved awareness about climate change impacts and adaptation among non-governmental stakeholders (overseen by UNDP).	1. Number of people (and % of women) who are informed about climate change impacts and adaptation through the project's awareness programme.	No awareness raising programme on climate change has been undertaken.	At least 1000 people (of which at least 50% are women) are informed about climate change and adaptation through the public awareness programme by the end of the project. This will include: 250 people from NGOs; 250 people from the private sector; 250 people from academia; and 250 people from CBOs.	Reports from awareness raising activities undertaken, including attendance registers. Attendance registers from seminars/presentations

4. Total budget and work plan- UNDP

The budget by project components and UNEP budget lines can be found in Annex 11.

Award ID:	00084491	Project ID(s):	00092471
Project Title:	Addressing urgent coastal adaptation needs and capacity gaps in Angola		
PIMS no.	5276		
Implementing Partner (Executing Agency)	Ministry of Environment		

SOF (e.g. GEF) Outcome/Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)	See Budget Note:	
OUTCOME 3: Increased inter- ministerial coordination and institutional capacity to adapt to climate change in Angola.	UNDP	62160	GEF LDCF	61300	Salary, Post Adj, Cst-IP Staff	0	0	117,768	117,768	235,536	1	
	MINAMB			71400	Contractual Services - Individual	4,500	4,500	4,500	4,500	18,000	2	
				71300	Local Consultants	-	62,500	62,500		125,000	3	
				75700	Training, Workshops and Conferences	-	20,000	20,000	15000	55,000	4	
				74200	Audio Visual and Print Production Costs	-	15,000	15,000	0	30,000	5	
	Total Outcome 3						4,500	102,000	219,768	137,268	463,536	
OUTCOME 4: Improved awareness about climate change impacts and adaptation among non-governmental stakeholders.	MINAMB	62160	GEF LDCF	72100	Contractual Services – Communications Company		40,000	40,000		80,000	6	
				74200	Audio Visual and Print Production Costs	11,500	24,426	26,500	26,500	88,926	7	
				75700	Training, Workshops and Conferences	15,000	15,000	15,000	15,000	60,000	8	
	UNDP			61300	Salary, Post Adj, Cst-IP Staff	0	0	117,769	117,769	235,538	9	
	MINAMB			74100	Professional Service - Audit Fees	3,000	3,000	3,000	3,000	12,000	10	
				71600	Travel	5,000	5,000	5,000	5,000	20,000	11	
				71400	Contractual Services - Individual	4,500	4,500	4,500	4,500	18,000	12	
	Total Outcome 4						39,000	91,926	211,769	171,769	514,464	
Project Management	UNDP	62160	GEF LDCF	74598	Direct Project Cost	5,500	5,500	5,500	5,500	22,000	13	
	TOTAL PROJECT						49,000	199,426	437,037	314,537	1,000,000	

Budget Notes

Budget Note	Description
1	<p>Cost for an International Technical Advisor under Outcome 3. International Technical Advisor (\$117,768 total annual salary) for 2 years (Year 3 and 4).</p> <p>The International Technical Advisor be an expert on adaptation and will oversee deliverables of all Components. S/he will also provide additional technical input under Outcome 3.</p> <p>The International Technical Advisor will also provide support to the GEF UNDP project entitled 'Promoting climate-resilient development and enhanced adaptive capacity to withstand disaster risks in Angola's Cuvelai River Basin' (GEF ID: 5166) on a cost-sharing basis.</p> <p>The TA is responsible for the following activities under Outcome 3:</p> <p>2.4.3. Engage with the private sector through relevant forums to disseminate EbA project concept notes.</p> <p>3.1 (all activities). Technical support and training to CIBAC and the GAC.</p> <p>3.2.1. Supervise and assist the National and International Adaptation Economics/Policy Expert to produce and present economic assessments.</p> <p>3.2.3. Supervise and assist the National and International Adaptation Economics/Policy Expert to produce and present policy briefs.</p> <p>3.2.4. Supervise and assist the National and International Adaptation Economics/Policy Expert to produce and present technical guidelines.</p>
2	National Project Manager \$4500 /year costs under Outcome 3 for 4 years.
3	<p>National Adaptation Economics/ Policy Expert (\$ 62,500 x 2 years = \$125,000)</p> <p>The International and National Adaptation and Economics/ Policy Expert will work together closely on the following activities:</p> <p>3.1.5 Provide training to the Secretariat of CIBAC and the GAC on climate change adaptation finance and climate change adaptation investment appraisal.</p> <p>3.2.1 Undertake and present assessments of the economic impacts of climate change on Angola's coastal zone, disaggregated by sector.</p> <p>3.2.2 Identify entry points at the national and provincial level for the integration of climate change adaptation interventions, including EbA, into relevant policies and sectoral budgets and propose policy revisions.</p> <p>3.2.3 Develop a coastal zone adaptation plan and mainstream the plan into relevant sectoral, regional and national development plans.</p> <p>3.2.4 Develop technical guidelines for GAC, sectoral ministries and the CIBAC on how to assess, plan and finance climate change adaptation interventions.</p>

4	<p>Training and workshops under Outcome 3.</p> <p>3.1.5. 4 x training workshops @ \$5000 per workshop for the Secretariat of CIBAC, technical staff of member ministries, and the GCA.</p> <p>3.2.1. 4 x workshop to present economic assessments and related policy briefs @ \$5000 per workshop, including travel assistance, breakfast and lunch. The workshop could also relate to any of the other relevant content produced under Output 3.2.</p>
5	<p>3.2.3 Costs for printing and disseminating policy briefs produced under @ \$15 000.</p> <p>3.2.4 Costs for printing and disseminating technical guidelines produced @ \$15 000.</p> <p>Printing budget could also be used to cover any of the other relevant content produced under Output 3.2.</p>
6	<p>Communications company @ \$250 x 160 days for year 2 and 3</p> <p>4.1.1. Design and implement awareness-raising campaigns in partnership with the TA. This will include <i>inter alia</i>: liaising with print and television media, conceptualising a short film, designing electronic and print materials.</p> <p>4.1.2. Disseminate lessons learned and knowledge generated through the project through appropriate national and regional networks, such as Africa AAKNET.</p>
7	<p>4.1.1 and 4.1.2 Printing of materials (such as posters, summaries of lessons learned): \$10 426</p> <p>Production and dissemination of short video clip: \$53 000</p> <p>Layout, translation and formatting of communication materials: \$15 000</p> <p>Multi-media such as talk shows, TV and Radio spots, billboards on the national road and other means of raising awareness: \$22 500</p> <p>Dissemination of knowledge through online platforms such as AAKNET and Adaptation Learning Mechanism: \$10 000</p>
8	<p>4.1.1 Conferences and meetings for awareness-raising activities. Talks: venue, speaker, catering: \$5000 x 10 per year.</p> <p>4.1.3 Conferences and workshops at academic institutions. 10 seminars from national consultants at local academic institutions @ \$1000 per seminar.</p>
9	<p>Cost for an International Technical Advisor under Outcome 4. International Technical Advisor (\$117,768 total annual salary) for 2 years (Year 3 and 4)</p> <p>The International Technical Advisor be an expert on adaptation and will oversee deliverables of all Components. S/he will also provide additional technical input under Outcome 4.</p> <p>The International Technical Advisor will also provide support to the GEF UNDP project entitled 'Promoting climate-resilient development and enhanced adaptive capacity to withstand disaster risks in Angola's Cuvelai River Basin' (GEF ID: 5166) on a cost-sharing basis.</p> <p>The TA is responsible for the following activities under Outcome 4:</p> <p>4.1.1 Meet with NGOs, relevant private sector stakeholders, academic institutions and the general public at project intervention sites to engage with them on: i) climate change impacts on the coastal zone; ii) potential climate change adaptation interventions; and iii) the benefits of EbA for increasing the resilience of livelihoods and communities to climate change.</p> <p>4.1.2 Disseminate lessons learned and knowledge generated through the project through appropriate national and regional networks, such as AAKNET and support the development of an e-library.</p> <p>4.1.3 Arrange for relevant national consultants hired through the project to present the findings of their assessments or studies at local academic institutions.</p>

10	Fees for annual financial audits (USD 3,000 per year)
11	<p>Travel budget for the TA to visit project sites and meet with relevant private sector stakeholders, academic institutions and general public to increase awareness of climate change among these non-governmental stakeholders. This travel will also allow the TA to provide technical oversight on the implementation of project activities under Component 2.</p> <p>Travel in Luanda, Dande and Longa = \$2000 per year x 4 = \$8 000</p> <p>Flights to Namibe \$400 return economy class x 4 flights per year = \$6 400</p> <p>Flights to Cabinda \$350 return economy class x 4 flights per year = \$5 600</p>
12	National Project Manager \$4500 /year costs under Outcome 4 for 4 years.
13	UNDP Cost Recovery charges-bills. (Direct project costs)

5. Management Arrangements

126. At the programme level, the project “Addressing urgent coastal adaptation needs and capacity gaps in Angola” is overseen by UNDP and UNEP as GEF Implementing Agencies (IAs). There are two distinct project documents that outline what each agency will be responsible for within the framework of a common logframe (see Section 2.4 and Section 3). LDCF resources will be implemented over a four-year period (2016–2019). UNEP will provide oversight for Component 1 and 2 (Outcomes 1 and 2) of the project. UNDP will oversee Component 3 (Outcomes 3 and 4).

127. This project document outlines management arrangements governing Component 3 of the overall programme (Outcomes 3 and 4). This component will be nationally executed by the MINAMB with UNDP Country Office (CO) direct support (assisted National Implementation Modality) in line with the Standard Basic Assistance Agreement (SBAA of 18 February, 1977) and the UNDP Country Programme Action Plan (CPAP 2009-2014) signed between the UNDP and the GoA.

Management structure

Executing Agency

128. MINAMB is the Implementing Partner of the project. It will provide overall leadership for the components 3 in close collaboration with: i) INAMET; ii) SNPC; iii) MINADER; and iv) the provincial and local governments of the Cabinda, Bengo, Kwanza Sul and Namibe Provinces.

129. MINAMB will be responsible for achieving the project Outcomes 3 and 4 (component 3) and will designate a senior official from the GAC to act as the National Project Director. His/her primary responsibility will be to ensure that LDCF resources produces the results expected from the component 3 as specified in the project document to the required standard of quality and within the specified time and cost constraints⁴⁶. The National Project Director will work closely with all partner institutions to link the implementation of the component 3 with the other components of the project and with complementary national programmes and initiatives. MINAMB will also designate an alternate that will act as National Project Director in his/her absence to ensure continuity.

Implementing Arrangements

130. As the implementing partner, MINAMB will have full responsibility to support accountability, transparency, effective management and timely achievement of results expected from the component 3.

131. The day-to-day management of LDCF resources dedicated to the component 3 will be the responsibility of the Project Management Unit (PMU), under the direct supervision of the **National Project Director**. The PMU will be based in Luanda and will comprise the following fulltime staff: i) National Project Manager; ii) Finance Manager; iii) Project Administrative Assistant, all hired by MINAMB; and iv) a Technical Advisor hired by UNDP on the explicit request by the GoA). The PMU will be further supported by an international Monitoring and Learning Specialist for the UNEP components.

132. A **National Project Manager** will lead the PMU. The National Project Manager will be recruited⁴⁷ on a full-time basis to coordinate the execution of the LDCF project under the

⁴⁶ within the conditions laid down by the Project Steering Committee and in line with UNEP and UNDP Policies and Procedures
⁴⁷ by MINAMB using national rules and regulations and ensuring international standards on recruitment processes

guidance of the National Project Director. He/she will be accountable to the National Project Director for *inter alia*: i) the quality, timeliness and effectiveness of the interventions carried out; and ii) the transparent use of project funds⁴⁸.

133. The National Project Manager will produce **annual work plans** (with associated cash advance requests/annual budget plan)⁴⁹ related to the implementation of the component 3, to be approved by the PSC at the end/beginning of each year. These plans will provide the basis for allocating resources to planned activities. Once the PSC approves the annual work plan it will be sent to the UNEP Task Manager and UNDP Regional Technical Specialist for Climate Change⁵⁰ for clearance with respect to GEF funds. Once the annual work plan and associated cash advance requests/annual budget plan is cleared by UNEP/UNDP, GEF funds related to the component 3 will be released by UNDP.

134. The National Project Manager will manage the project Component 3 in line with all work plans, and in accordance with GEF and UNDP guidelines. In addition, he/she will deliver **quarterly progress reports** to the National Project Director, UNEP Task Manager and UNDP CO. These reports will include information on: i) the status of activities; and ii) challenges encountered on the ground during Component 3 execution. In particular, the National Project Manager will: i) provide on-the-ground information for component 3 progress reports; ii) engage with stakeholders; iii) organise the PSC meetings; iv) provide technical support to the project, including measures to address challenges to project implementation; and v) participate in training activities, report writing and facilitation of expert activities that are relevant to the National Project Manager's area of expertise.

135. The National Project Manager will also produce⁵¹: i) Component 3 annual financial reports, with support from the **Financial Assistant**; ii) bi-annual progress reports and ensure that these information are well reflected in the overall project PIRs; iii) budget revisions; and iv) any other reports at the request of the PSC. These reports will summarise the progress made by the project against the expected results, explain any significant variances and detail the necessary adjustments. Consequently they are the main reporting mechanism for monitoring project activities.

136. An international **Technical Advisor** (P3) will be recruited by UNDP (on the explicit request by the GoA). He/she will be based in Luanda with regular field missions to project sites. Under the overall guidance of the UNDP Country Director and direct supervision of the Programme Specialist for Climate Change (UNDP Angola), the Technical Advisor will be responsible for providing overall technical backstopping, monitoring and operational support to the entire project. This Technical Advisor will be an expert on adaptation and will provide technical support to project activities and to the CCC on related matters. The Technical Advisor will also provide support to the GEF UNDP project entitled 'Promoting climate-resilient development and enhanced adaptive capacity to withstand disaster risks in Angola's Cuvelai River Basin' (GEF ID: 5166) on a cost-sharing basis. This TA will not provide any oversight services and is considered project staff.

137. .

138. The **Project Implementation Support Team** will comprise of national and international experts contracted by UNEP to perform specific tasks required by the project related to *inter alia* climate vulnerability, EWS and ecosystem restoration. In addition,

⁴⁸ The Executing Agency is also accountable for the use of LDCF project funds.

⁴⁹ under the supervision of the Project Director and with support from the rest of the PMU

⁵⁰ at the GEF Regional Coordinating Unit (RCU)

⁵¹ under the supervision of the Project Director and with support from the rest of the PMU

competent organisations – such as NGOs or local consultancies – hired through a competitive process to implement EbA and climate-resilient agriculture⁵² will be included in this support team.

Project Management Costs

139. The PMU, and the duties it will perform, is essential for the successful implementation of LDCF resources. However, the costs related to establishing this unit – including staff salaries, office rent, office equipment and communication costs – will be more than the project management costs specified in the PIF for this project. This is due primarily to the high cost of living in Angola. Indeed, Luanda is consistently ranked as the most expensive city in Africa to live in⁵³ and has amongst the highest salary post-adjustments for any country within the UN system. Despite efforts to reduce project management costs, such as cost sharing with the GEF/UNDP Cuvelai project (GEF ID: 5166) and finding an efficient alternative that has enabled a reduction of 50% of the office rental budget, project management costs remain high. Therefore, to ensure the successful implementation of the LDCF project management costs have been increased from 5% of the project costs to 7.2% of the project costs (US\$414,000).

Project assurance

140. UNDP will provide cycle management services for the Component 3 as a GEF IA. The UNDP Country Office and UNDP-GEF Unit will monitor the project's implementation and achievement of the project outcomes 3 and 4 and related outputs.

141. As requested by the GoA, the UNDP Country Office will provide the following support services for implementation of this Component 3 of LDCF resources:

- payments, disbursements and other financial transactions;
- recruitment of staff, project personnel and consultants;
- procurement of services and equipment, including disposals;
- organisation of training activities, conferences, workshops;
- travel authorization, GoA clearances ticketing and travel arrangements; and
- shipment, custom clearance and vehicle registration.

142. While the administrative and financial conditions are created for the fully national implementation by the GoA, ad hoc requests for support may be made to the UNDP CO by UNEP if deemed appropriate in order to implement the project as per the work plan, as UNEP is not based in the country. The UNDP cost recovery policy will be applied to these kind of services. Based on the Universal Pricing List, an estimate has been made of these fees and included in the project budget so that they are already accounted for.

Project Steering Committee

143. The PSC is the group responsible for making management decisions by consensus when guidance is required by the National Project Manager. This will include *inter alia* approval of project work plans and any revisions by UNEP, UNDP and the MINAMB. In order to ensure UNEP and UNDP's ultimate accountability, PSC decisions should be held to a standard of cost-effectiveness, fairness, integrity, transparency and effective international

⁵² in partnership with local communities in Chiloango, Barra do Danda, Longa and Bero

⁵³ Mercer 2014 Cost of Living Survey. <http://www.mercer.com/newsroom/cost-of-living-survey.html>. Accessed 16 March 2014.

competition. Project reviews by this group will be made at designated decision points during the running of a project, or as necessary when raised by the National Project Manager.

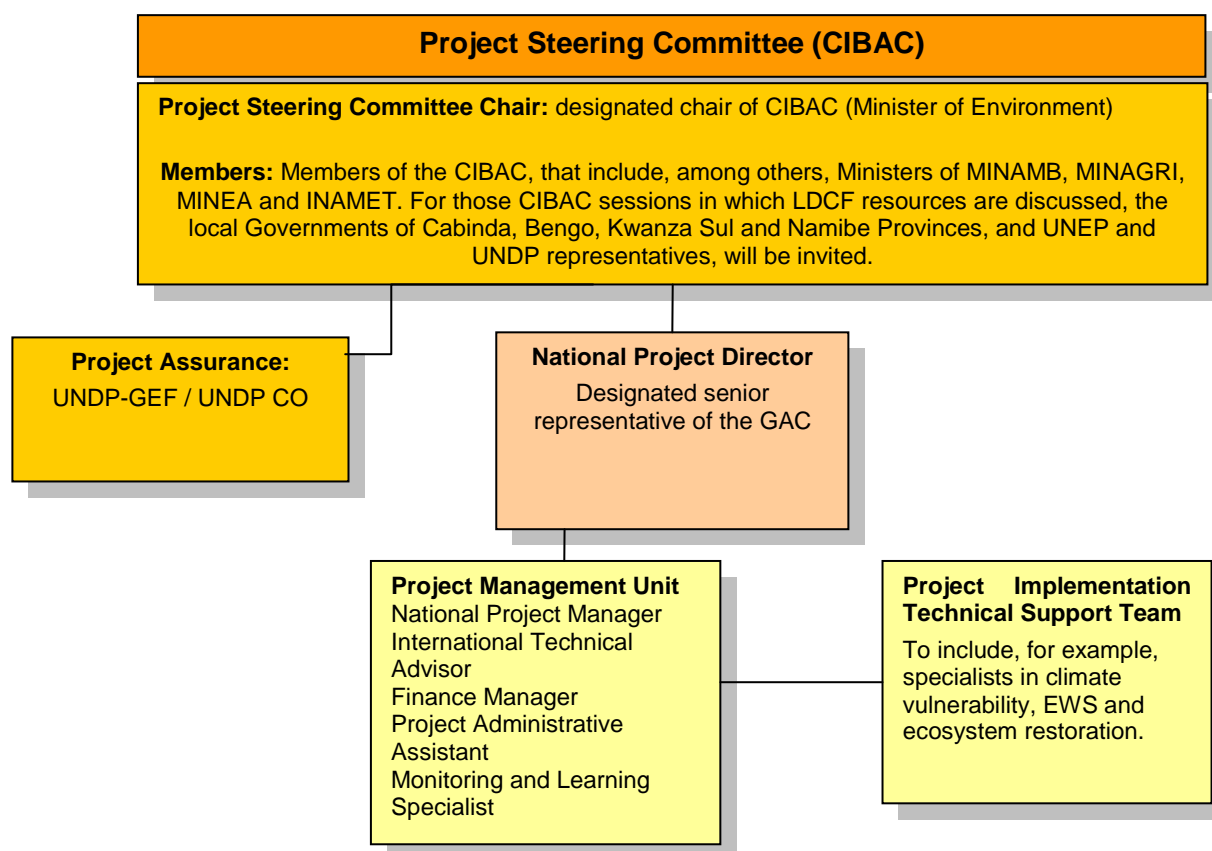


Figure 1: LDCF-financed project management structure

144. The Inter-ministerial Commission for Biodiversity and Climate Change (CIBAC) will provide the forum for the PSC. The PSC will also be comprised of representatives from UNEP and UNDP, and local Governments of Cabinda, Bengo, Kwanza Sul and Namibe Provinces, as illustrated in Figure 2. Reasons that the CIBAC has been chosen include: i) avoiding duplication of current structures; and ii) because this forum is the highest coordination and decision making body in relation to climate change. Representatives of other stakeholder groups may be included in the PSC, as considered necessary. The PSC will meet at least twice per annum (more often if required). Specific roles of the PSC are outlined in Annex 3.

Project Support Team

145. Component 3 implementation will be supported by contractors, selected according to UNDP procurement rules.

146. The MINAMB may contract other entities – defined as Responsible Parties – to undertake specific project tasks through a process of competitive bidding according to procurement rules and regulations of the GoA. However, if the Responsible Party is another government institution, Inter-governmental Organisation or a United Nations agency, competitive bidding will not be necessary and direct contracting will be applied. Confirmation of direct contracting will need to comply with comparative advantage, timing, budgeting and

quality criteria. If direct contracting criteria cannot be met, the activity will be open to competitive bidding.

Financial procedures

147. The financial arrangements and procedures for the project Component 3 are governed by the UNDP rules and regulations for National Implementation Modality (NIM)⁵⁴ with UNDP CO direct support

148. For the Component 3 and given the NIM scenario that applies in Angola, most financial transactions will be conducted through direct payment requests made by MINAMB. The National Project Manager – with support from the Project Management Unit – will prepare Request for Direct Payments and Request for Advance of Funds. These will be signed by the National Project Director (or alternate) to be sent to UNDP CO. LDCF resources will be audited in accordance with UNDP Financial Regulations and Rules and applicable audit policies. One auditing company will manage the entire audit of LDCF resources, providing a separate reports for Component 3.

6. Monitoring Framework and Evaluation

149. The project will be monitored through the following M&E activities. The M&E budget is provided in Table 4 below. The M&E framework set out in the Project Results Framework in Part III of this project document is aligned with the AMAT and UNDP M&E frameworks. All budgeted M&E activities, , Inception Workshop, and mid-term/terminal evaluations, will be paid by UNEP. The financial audits of the component 3 will be paid by UNDP.

150. Project start: A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and program advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

- Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff *vis-à-vis* the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- Based on the project results framework and the LDCF related AMAT set out in the Project Results Framework in Section 3 of this project document, and finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- Discuss financial reporting procedures and obligations, and arrangements for annual audit.

⁵⁴ There are two scenarios of NIM: (a) full national implementation, in which national implementing partners directly assume the responsibility for the related output (or outputs) and carry out all activities towards the achievement of these outputs; and (b) national implementation, in which the national implementing partner assumes full responsibility for the related output(s) but where, at the request of the government, UNDP as a responsible party undertakes specific and clearly defined activities for the implementing partner.

- Plan and schedule PB meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first PB meeting should be held within the first 12 months following the inception workshop.
- An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly:

- Progress made under the Outcomes 3 and 4 shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP/GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).
- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs will be used to monitor issues, lessons learned. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually:

Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

- The APR/PIR includes, but is not limited to, reporting on the following:
- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management

151. Periodic Monitoring through site visits: UNDP CO and the UNDP-GEF region-based staff will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

152. Mid-term of project cycle: The project will undergo an independent Mid-Term Review at the mid-point of project implementation (expected to be at the beginning of 2017). The Mid-Term Review will be under UNEP responsibility. The Terms of Reference for this Mid-term review will be prepared by the UNEP, UNDP and the GoA. The LDFC/SCCF AMAT as set out in the Project Results Framework in Section 3 of this project document) will also be completed during the mid-term evaluation cycle.

153. End of Project: An independent Terminal Evaluation, also managed by UNEP, will take place three months prior to the final PB meeting and will be undertaken in accordance with GEF guidance.. The Terms of Reference for this evaluation will be prepared by the UNEP, UNDP and the GoA.. The LDFC/SCCF AMAT as set out in the Project Results Framework in Section 3 of this project document) will also be completed during the terminal evaluation cycle. The Terminal Evaluation should also provide recommendations for follow-

up activities and requires a management response, which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC).

154. Learning and knowledge sharing: Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

155. There will be a two-way flow of information between this project and other projects of a similar focus.

156. Audit: Project/component 3 (expenditures of budget under UNDP responsibility) will be audited in accordance with UNDP Financial Regulations and Rules and applicable audit policies.

Table 4. Costed Monitoring and Evaluation plan

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> Project Manager (MEE) PIU UNDP CO, UNDP GEF, UNEP 	Indicative cost: 7,000	Within first two months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. PIU, esp. M&E expert 	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> Oversight by Project Manager (MEE) PIU, esp. M&E expert Implementation teams 	To be determined as part of the Annual Work Plan's preparation. Estimated 3,000	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> Project manager (MEE) PIU UNEP TM UNDP CO UNDP RTA UNDP EEG 	None	Annually
Periodic status/progress reports	<ul style="list-style-type: none"> Project manager and team 	None	Quarterly
Baseline Evaluation	<ul style="list-style-type: none"> Project manager (MEE) PIU UNEP TM UNDP CO UNDP RCU External Consultants (i.e. evaluation team)	Indicative cost: 35,000	

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Mid-term Evaluation	<ul style="list-style-type: none"> ▪ Project manager (MEE) ▪ PIU ▪ UNEP TM ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 35,000	At the mid-point of project implementation.
Terminal Evaluation	<ul style="list-style-type: none"> ▪ Project manager (MEE) ▪ PIU ▪ UNEP TM ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost : 35,000	At least three months before the end of project implementation
Audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNEP TM ▪ Project manager (MEE) ▪ PIU 	Indicative cost: 25,000	Yearly
Visits to field sites	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives 	For GEF supported projects, paid from IA fees and operational budget	Yearly for UNDP CO, as required by UNDP RCU
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US\$ 140,000 (+/- 2% of total GEF budget)	

7. Legal Context

157. Standard text has been inserted in the template. It should be noted that although there is no specific statement on the responsibility for the safety and security of the executing agency in the SBAA and the supplemental provisions. The second paragraph of the inserted text should read in line with the statement as specified in SBAA and the supplemental provision, i.e. “the Parties may agree that an Executing Agency shall assume primary responsibility for execution of a project.”

158. This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA [or other appropriate governing agreement] and all CPAP provisions apply to this document.

159. Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP’s property in the implementing partner’s custody, rests with the implementing partner. The implementing partner shall: put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried; and assume all risks and liabilities related to the implementing partner’s security, and the full implementation of the security plan.

160. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

161. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999).

162. The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

8. Annexes

Annex 1: Risk analysis

Annex 2: Key assessment reports

Annex 3: Terms of Reference for project personnel

Annex 4: Letters of co-financing

Annex 5: Social and Environmental Screening Template

Annex 6: Site selection

Annex 7: Tracking Tool for Climate Change Adaptation Projects

Annex 8: Map of Angola detailing LDCF intervention sites

Annex 9: Ongoing and related initiatives

Annex 10: Description of project intervention sites

Annex 11: Budget by project components and UNEP budget lines

Annex 1: Risk analysis

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
National level risks						
1	Institutional capacity and relationships between line ministries are not sufficient to provide effective solutions to climate problems that are complex and multi-sectoral.	Multi-sectoral adaptation interventions are compromised and interventions are confined to those sectors willing to engage in cross-sectoral dialogue. The vulnerability of certain sectors and Angola as a whole to climate change is not fully addressed.	Medium	<ul style="list-style-type: none"> • Develop technical capacity of the CIBAC to support inter-ministerial coordination and planning around climate change adaptation. • Ensure technical representatives from all line ministries are included in the training provided to the secretariat of the CIBAC. This will increase institutional capacity within, and facilitate coordination between different ministries. • Produce sectoral vulnerability assessments for different line ministries to promote support for the LDCF project activities. 	Institutional	P= 3 I= 4
2	Long- and medium-term climate change adaptation priorities undermined by national emergencies or civil unrest.	Project activities are interrupted. Natural and financial capital is lost.	Medium	<ul style="list-style-type: none"> • The project manager and TA will keep abreast of national events and politics to ensure knowledge of any potential disruption to project activities at intervention sites. This to 	Social, environmental	P= 1 I= 4

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				allow for the timely implementation of contingency plans. Should civil unrest/national emergencies be deemed by the project manager and TA to be a direct threat to project activities at implementation sites, alternative project sites identified during the PPG phase will be considered.		
3	National financial instability due to high dependence on oil prices	Climate integration into national budgets are undermined by several cuttings in national budgets	High	<ul style="list-style-type: none"> • Strengthen advocacy efforts focused on long- and medium-term economic benefits on integration of adaptation options into national budgets and communicate these to policymakers throughout. • Engage with the private-sector through EbA project concept notes to promote investments outside of the national budget to sustain and upscale climate change adaptation interventions. 	Economic, Political	P= 2 I= 3

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
4	Unclear land tenure reduces the sustainability of EbA and climate-resilient land restoration interventions.	Communities degrade restored land as they consider it individually owned.	Low	<ul style="list-style-type: none"> Land that will be restored is owned by the state. The project will raise community awareness of this through training of local communities. Ensure technical representatives from all line ministries are included in the training provided to the secretariat of the CIBAC. This will increase institutional capacity within, and facilitate coordination between different ministries, ensuring that different ministries do not plan to use restored land for alternative purposes. 	Political	P= 1 I= 4
Local level risks						
5	Current climate and seasonal variability and/or hazard events prevent implementation of planned activities.	Economic loss or physical damage to infrastructure delays implementation of project activities.	Medium	<ul style="list-style-type: none"> Meteorological predictions and seasonal variability at each site will be used to inform the selection of climate-resilient species and techniques to: i) assist plant growth particularly in the seedling/sapling phase; and ii) reduce risk of 	Economic	P= 3 I= 3

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				<p>damage from climate-induced natural hazards.</p> <ul style="list-style-type: none"> Intervention sites will be mapped to establish the extent to which they are vulnerable to specific natural hazards. This mapping will be used to inform restoration practices and techniques. Select EWS equipment that is resilient to climate-related risks. 		
6	Communities do not support interventions and do not adopt ecosystem management activities for adaptation during or after the LDCF project because of limited immediate benefits of EbA.	Unsustainable use of natural resources continues, leading to further degradation of ecosystems. Climate-resilient land management techniques are not implemented in the long term. Consequently, communities continue to be vulnerable to climate-induced natural hazards.	Medium	<ul style="list-style-type: none"> Co-develop community based management plans with coastal communities to guide management activities over time. Implement alternative livelihoods that have been deemed financially, technically and socially viable/feasible to reduce reliance on intensive land use. Engage with community stakeholders through-out the project's implementation 	Social, environmental	P= 2 I= 3

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				<p>to strengthen their continued buy-in into the LDCF project.</p> <ul style="list-style-type: none"> • Actively involve coastal communities in project implementation through <i>inter alia</i>: i) establishing community management committees; ii) liaising with the community management committees and other community members to identify intervention sites for EbA interventions; and iii) developing and implement community-based EbA intervention management plans. • Raise public awareness on the capacity of the restored ecosystems to increase community resilience to climate change. • Foster a bottom-up, grassroots approach throughout the project's development and implementation phases. 		

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				<ul style="list-style-type: none"> • Improve capacity building and training of the communities to improve their understanding of the adaptation benefits of the EbA activities. • Implement activities that have direct benefits in addition to the ecosystem restoration interventions. 		
7	Lack of already established implementing partners at the local level and/or low capacity level for the implementation of local interventions	Low implementation rate; Low capacity of communities engagement;	Medium	<ul style="list-style-type: none"> • A criteria for site selection during the PPG phase was the presence of suitable implementing partners at intervention sites, so this risk has been significantly minimized. • If local implementing partners are unable to deliver results timeously, national NGOs or partners, such as Development Workshop or ADRA, will be engaged to coordinate project interventions at the project sites. 	Technical	
8	Priority interventions implemented	Project interventions are not	Low	<ul style="list-style-type: none"> • Use cost effectiveness as a core principle 	Economic	P= 1 I= 3

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
	are not found to be cost effective.	upscaled for large-scale EbA programmes.		<ul style="list-style-type: none"> in the implementation of adaptation measures (EbA and EWS). Record detailed information on cost effectiveness. Such information will be widely disseminated for use by future projects and research. 		
9	Baseline project activities not achieved as planned.	The LDCF project activities are compromised as a result of a lack of existing interventions upon which to build.	Medium	<ul style="list-style-type: none"> Design activities that build on baseline projects but do not depend entirely on the success of the baseline projects. The activities to be implemented within the LDCF project are designed to be beneficial to the coastal communities even if they are implemented alone. 	Economic	P= 3 I= 2
10	Large-scale infrastructure development – such as the Port near Barro do Dande – takes place within project areas.	Project activities are disrupted or delayed.	Medium	<ul style="list-style-type: none"> The project manager and TA will work with appropriate governmental agencies to ensure prioritisation of the LDCF project in the project areas. The PMU will coordinate with other line ministries to 	Institutional	P= 3 I= 4

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				<p>ensure that they are up to date on the location of planned infrastructure development.</p> <ul style="list-style-type: none"> A port is to be constructed near Barro do Dande (see site reports in Appendix 15 in UNEP PD for further details). Based on stakeholder consultations, the port construction will be geographically removed from the LDCF project intervention sites. However, the PMU will keep track of plans for the port development and if, during the inception phase, the construction of the port is deemed to have a high risk of negatively impacting on the project activities then an alternative site may be selected. 		
11	Uncontrolled settlements into the natural ecosystems.	The restoration activities are unsustainable.	High	<ul style="list-style-type: none"> Raise awareness of the national and local government on this potential risk, with a focus on coastal sectors. Raise awareness of communities 	Social, environmental	P= 4 I= 4

	Description of risk	Potential consequences	Risk rating	Mitigation measures/proposed interventions	Risk category	Probability & Impact (1=low, 5=high)
				<p>on the benefits of restored natural ecosystems for adaptation and their livelihoods.</p> <ul style="list-style-type: none"> • Maximise the economic benefits from sustainable natural resource management. 		
1 2	Theft and vandalism of early warning and climate monitoring equipment.	The reliability of weather reports, forecasts, and early warnings will be compromised in pilot areas if a significant proportion of infrastructure is no longer functional.	Medium	<ul style="list-style-type: none"> • Hold public awareness workshops to sensitise communities on the importance of EWS infrastructure. • Involve local stakeholders in the maintenance of equipment and the collection of data. • Install fencing around equipment in high risk areas. 	Social Technical	P= 1 I= 4

Annex 2: Key assessment reports

The following assessment reports are available in a separate zip file:

- Site report for Chiloango
- Site report for Longa
- Site report for Barra do Dande
- Site report for Bero

Republic of Angola

Ministry of Environment

Inception Mission Report



Prepared by:
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Image 1: Visit to fishing community in Barro do Dande



Image 2: International consultant with Ministry of Environment colleagues at Barro do Kwanza

Acknowledgements

UNDP would like to thank all of those who participated in the stakeholder consultations and Project Team Meeting. Your knowledge, experiences and recommendations are greatly appreciated and will enable the project to meet the most urgent needs in the coastal zone area of Angola, and to maximise the benefits of the project activities.

Brief Summary of the mission

The mission was undertaken to support the Angolan Ministry of Environment (MINAMB), UNEP and UNDP to engage with line ministries and other key stakeholders in the design of the project titled 'Addressing Urgent Coastal Adaptation Needs and Capacity Gaps in Angola', to be financed by GEF-LDCF. The primary objectives of this mission were to: i) update the outcomes, outputs and activities designed at the PIF stage; ii) identify potential baseline projects and co-financing; iii) identify and select potential interventions; and iv) develop indicative financing/budget for proposed project activities, including GEF grant funding, co-financing amounts from the baseline project and any additional local funding that may be available. To achieve these objectives; the C4 consultants and the project team conducted meetings with key stakeholders in government, development agencies and NGOs. Additional information was collected through visits to potential pilot areas and meeting with local community members. An inception workshop with key stakeholders had been planned, but overlap with national budgetary meetings and unforeseen delays in sending out workshop invitations necessitated the delay of the workshop until late January 2015. Instead the project team – including the UNFCCC focal point, members of the GAC, UNDP, national consultants and C4 consultants – met for a morning to discuss project design, site selection, and team deliverables (see Annex 3).

A further purpose of the inception mission was to inform stakeholders about the project objectives and to generate consensus with regards to the selection of interventions. Particularly, meetings during the inception mission aimed to:

- i) provide an understanding of the project, including the project components;
- ii) verify that the interventions and project components reflect the priority needs for the coastal zone area;
- iii) generate discussion to identify risks to successful project implementation; and
- iv) build ownership of the project.

A field mission was organised to familiarise the C4 consultants with coastal ecosystems and local communities that are vulnerable to the effects of climate change (see image 1 and 2). The field mission focused on Luanda South (Barra do Kwanza) and Bengo North (Barra do Dande).

Stakeholder consultation programme during the inception mission

The information collected during the meetings listed below is presented in Annex 2.

Date	Stakeholder	Institution/Project
12 November	Allan Cain Paul Robson Zia Tiago	DW
13 November	Ana Maria Carvalho	World Bank
13 November	Luis Constantino	GAC
13 November	Manuel Enock	IDA
13 November	David Tunga	Cabinet of Food Security
13 November	Mamoudou Diallo	FAO
13 November	Nelvina Barreto-Gomes Mateus Felisberto	AfDB
14 November	Arnaldo Andrade	MINTRANS, Marine Institute
14 November	Maria Alvaz	MINPES, Institute of Aquaculture
14 November	Dr Filomena Vas Velho	National Institute for Fisheries Research
14 November	Nkosi Luyeye	Institute for Artisanal Fisheries
14 November	David Naseimento	INAMET
16 November	Manuel Xavier Junior	MINPET

Annex A: List of participants and contact details

#	Name	Institution/Agency	Email address
1.	Allan Cain	Development Workshop	allan.devevorks@angonet.org
2.	Paul Robson	Development Workshop	paul.robson@angonet.org
3.	Zia Tiago	Development Workshop	Josetiago.dworg@angonet.org
4.	Ana Maria Carvalho	The World Bank	acarvalho1@worldbank.org
5.	Luis Constantino	GAC	luconsta@hotmail.com
6.	Manuel Enock	IDA	enockmanuel@hotmail.com
7.	David Tunga	Food Security Cabinet	tunga100565@gmail.com
8.	Mamoudou Diallo	FAO	mamoudou.diallo@fao.org
9.	Lisa Angeli	FAO	lisa.angeli@fao.org
10.	Paulo Vincente	FAO	paulo.vincente@fao.org
11.	Nelvina Barreto-Gomes	AfDB	n.barretogomes@afdb.org
12.	Mateus Felisberto	AfDB	f.mateus@afdb.org
13.	Arnaldo Andrade	MINTRANS, Martine Institute	arteimand274@hotmail.com
14.	Maria Alvaz	Institute for Aquaculture	mariaalvaz66@hotmail.com
15.	Dr Filomena Vas Velho	National Institute for Fisheries Research	menavelho@gmail.com
16.	Nkosi Luyeye	Institute for Artisanal Fisheries	
17.	David Nascimento	INAMET	domingos.nascimento@inamet.gov.ao
18.	Manuel Xavier Junior	MINPET	manuel.junior@minpet.gov.ao

Annex B: Information collected during the stakeholder consultations

12 November 2014

Development Workshop

Allan Cain – Director

Paul Robson – Senior Researcher, Advisor and Trainer

José Tiago – Head of Climate Change Adaptation Research

- During the war, many people migrated from the interior to the coastal strip of Angola. Between 60 and 70% percent of the population currently live along the coastal strip.
- DWA has a strong urban focus, and believe that climate change will affect poorly planned and over-crowded urban areas more intensely than rural areas.
- Is currently in the third year of a three year project: Climate Change, Water Supply and Coastal Settlements in Post-War Angola, funded by IDRC CRDI (USD 600 000). DW would like our project to offer some continuity with research that they have already started in Namibe, Cabinda and Luanda.
- Emphasised high degree of climate variability in coastal areas and the limitations on climate monitoring within Angola. They are putting together historical data in order to form a better picture of variability within pilot settlements. There is a lack of environmental statistics from 1974 onwards – Angola has only just caught up with the number of weather stations that they had in the 1930's.
- From their data it seems that there are increasingly rapid cycles of flooding and drought. Methodology includes focus groups, household surveys and GIS mapping.
- One challenge is that in many coastal cities there is a rapid migration from the city centres (which are becoming gentrified) to the more environmentally high risk areas on the city margins (often in flood plains).
- Climate change is exacerbating existing endemic health problems such as malaria and diarrheal diseases.
- DW are about to start testing the use of basic phones for communicating water monitoring information from local communities to a central database.
- NGO networks include the Land Network and the REDE Maiombe Network.
- Cabinda is coping better with flooding than Luanda. There is less intensity of rainfall and better waste water management.
- An EWS systems could be useful for residents of cities positioned at river mouths, allowing time for people to respond to the threat from heavy rainfall upstream. They have installed three flow monitors in Benguela Province.
- DW has land tenure software that could assist in identifying relevant community stakeholders in environmentally sensitive areas. Approximately 10% of people have land titles, for the rest their ownership is occupation-based.

13 November 2014

World Bank

Ana Maria Carvalho – Operations officer and acting Country Director

- Ana suggests that we speak to FAO country representative subcontracted by the MINAGRI to implement the Agriculture Project. The agriculture project is meant to have ended this year but has been extended for one year.

- The FAS has three components: i) construction and rehabilitation of basic infrastructure; ii) an economic development pilot; and iii) capacity building of local government.
- World Bank has been requested to provide additional funding to the GoA. If this funding comes through there will be a USD 250 million investment in agriculture.
- Ana agrees in principle that the LDP project could contribute co-financing and is willing to sign a co-financing letter, pending discussions with the MINAGRI.

GAC

Luis Constantino – Director of Drought and Desertification Unit

- The Ministry of Civil Protection deals most with climate-related catastrophes.
- In his experience with working with INAMET, EWS systems can be low cost. For example, flow monitoring can just be a measuring device that is monitored by a municipal government employee such as an extension officer. He or she would not be paid more to perform this service, but would be capacitated to do so as part of his or her current portfolio of tasks.
- Local communities are generally keen to cooperate with regards to weather monitoring, as they recognise the need for an EWS service.
- Current means of communicating with local communities by INAMET office include: T.V, newspapers, bulletins and radio. Community radio stations are not a viable option for political reasons. Importantly, flags are used in remote rural areas and also in cities to warn people of different environmental threats. For example, in Luanda flags are used on beaches to denote safe/ unsafe swimming. Communities are trained to understand the meaning of different flags and to respond appropriately.
- Vandalism of weather stations is a low risk, in his opinion.
- There are two different ministerial groups that relate to the environment: CIBAC attended by Ministers and the Multi-sectoral Commission for Environment (CMA), attended by deputy Ministers.

Institute of Forestry Development (within MINAGRI)

Manuel Enock – Deputy Director

- The mission of this ministry is to manage forests, including mangroves.
- Currently they are implementing two projects:
 1. Conservation of forests in coastal areas and combatting desertification, financed by GoA and an Israeli NGO. This is being implemented in collaboration with an Israeli group who are providing technical assistance. It is a public investment project. Sites: Started in Namibe and will soon be implemented in Benguala and Kwanza Sul.
 2. Integrated project for the protection and development of Angolan coastal forests (PIPDEFA), financed by EU and COSPE (~EUR 1.2 million) is focussed on the management of natural resources by local communities, with a focus on improving community livelihoods. In particular, they want to give communities income streams from NTFPS, to reduce the impact of charcoal production on forested areas. Conservation agriculture practices being taught include agro-forestry, retention of vegetation and water management. NTFPS include honey, mushrooms, roots and tubers. Most of these are for subsistence but they are exploring the potential of linking honey production to markets. The honey houses established by the project will remain assets of the communities after the project has ended.
- Neither of these projects deal with erosion control or mangroves, so the Deputy Director is keen to build synergies with our project to fill this gap.

- The Ministry of Planning coordinates all the projects being run through the government. They will be a good source of co-financing letters.

Food Security Cabinet (within MINAGRI)

David Tunga – Director

- Considers Namibe the area most effected by climate change due to desertification.
- The Cabinet has a project to detect and manage food insecurity.
- The Cabinet has installed 150 rain gauges and 20 automatic weather stations across the country in collaboration with the Ministry of Energy and Water (MINEA).
- Grass roots research across the country has helped the Cabinet to understand patterns of vulnerability across different regions. This information is downscaled to a village level because of the village-level methodology. This data assists with the distribution of food aid.
- FEWSNET no longer has country offices, but they have a regional presence, based in South Africa.
- Cassava is a drought resilient crop.
- The movement of people between areas of Angola during the war has also changed agricultural patterns. For example, beans, cassava and cattle are now cultivated across more of the country.
- One intervention to combat drought in dryer provinces is the digging of boreholes.
- Education is a big part of food security. For example, people in Namibe and Cunene like to retain their cattle for status, rather than selling them to improve their financial position and to prevent overstocking.
- Food security cabinet works closely with the IDA and the Institute of Forestry Development.

FAO

Mr. Mamoudou Diallo – Director

Lisa Angeli

Paulo Vincente

- FAO has a strong farmer field school methodology. They have established field schools in Namibe and Cunene.
- Animal/human conflict is an issue in Cabinda (rhinos and elephants).
- In Cabinda mangrove destruction is an issue that is not being addressed. They are open to creating synergies with us in this regard.
- They are engaged in a project related to cattle in Namibe and Cunene. Grazing routes have been disrupted by fences and structures in this area, preventing farmers from accessing the fodder necessary to sustain their livestock. Livestock are dying. The project is helping to manage conflict over pasture land and also to improve the quality of the pastures available.
- Adventist Development and Relief Agency (NGO) are another important organisation to speak to with regards to the establishment of farmer field schools.

AfDB

Nelvina Barreto-Gomes – Country Programme Officer

Mateus Felisberto – Senior Economist

- AfDB are undertaking two main projects in Angola:
 - One is the FSSP which has recently been approved.
 - The other is the Environmental Sector Support Programme (PASA), which has been identified as a baseline project in our PIF. A fourth component has been developed

using GEF funding: a PIF has been approved and PPG phase is underway (Full sized project, #5231, USD 4.416 million). This component relates to climate change and land management practices. Research facilities will be developed in various provinces and will be equipped with laboratory equipment. This is likely to have implications for the amount of cofinancing still available from the PASA and SFSP for our project.

14 November 2014

MINTRANS, Marine Institute

Arnaldo Andrade – Maritime Inspector (environmental focal point)

- A new port is being developed in Bengo, one of the biggest projects currently under the MINTRANS.
- A passenger terminal is being developed at Masulu Island to try to deal with the problem of transport into the CBD from residential parts of the city further out.
- Mangrove destruction is a pressing issue.
- EIAs are essential for all development projects, but they are not always enforced or effective in protecting the environment.
- New legislation governing marine areas includes climate change. To pass legislation in Angola one must engage with government, NGOs, private sector. Working groups are often formed to discuss the proposed legislation.
- Works with the Benguela Current Commission (BCC). The BCC meets once a month. 14 ministries are involved. The Minister of Environment is the coordinator of the BCC.

MINPES, Institute of Aquaculture

Maria Alvaz – National Director of Aquaculture

- The Institute of Aquaculture is in the process of starting various inland and coastal aquaculture initiatives. They aim to involve local communities, with a focus on women, youth, ex-soldiers and war veterans. An idea in exploration is that co-operatives could start small aquaculture initiatives and sell the fish directly to communities.
- Fresh water fish used in aquaculture include catfish and tilapia. Salt water fish include grouper. One of the coastal projects involves releasing live carapou young back into the ocean to address the collapse of the species.
- There is an offshore aquaculture project being planned for Cabinda.
- There is a big local market for fish.
- An action plan for aquaculture is currently in the approval process.

MINPES, INIP

Dr Filomena Vas Velho – Director

- There is a report on the state of fisheries resources which contains a large amount of biological information.
- The Institute has monitoring programmes collecting biological information from 7 monitoring sites. They take samples for physical parameters such as temperature, salinity and oxygen. There are fixed stations at Luanda, Benguela and Namib that have been monitored twice a week for 20 years.
- An EU project has showed an interest in data for climate change analysis.
- A barrier to research is that they lack a research vessel, so they are collecting data around two times of the year rather than four.

- The Institute does not yet have capacity to analyse the data, and are receiving training in this regard.

MINPES, (Institute for Artisanal Fisheries)

Nkosi Luyeye – Director General

- Along the 1650 km of Angolan coastline there are communities 100% dependent on artisanal fisheries. They are very vulnerable.
- There is a government programme starting next year to generate awareness about mangrove cutting in coastal communities.
- IDPAA also wants to build capacity to do extension work. IDPAA is in charge of monitoring catch along the coast, but they only have six representatives in each coastal province.
- The plan to develop artisanal fisheries has a budget of USD 24 million. Luanda will be the first pilot.
- Fishers are moving away from associations to cooperatives as a means of organising themselves. A law will soon be approved at the national assembly to strengthen the cooperative as a legal entity, allowing more government funding support.

INAMET

David Nascimento, Director General

- INAMET currently has a strategic plan, approved by government, outlining the expansion of the MET network, including coastal areas.
- Currently there are automated meteorological stations at Cabinda (1), Bengo (1), Luanda (2), Benguela (3) and Namibe (1). There are also rain gauges in each of those provinces. There is good historical data for each of those five provinces – stations are working perfectly, except for the one at Bengo.
- External support to develop this network is welcomed, but the director asks that we work closely with INAMET so that they can advise us on the type of equipment that is compatible with their network. The data can therefore be shared.
- They use Campbell and Lambridge units in their system (the latter is of a higher quality). The costs of a unit will vary, depending on the number of sensors used. INAMET is happy to share technical information with us regarding their requirements.
- In terms of EWS, the data is analysed and sent to the Ministry of Civil Protection. There is a video conferencing link set up so that the two ministries can communicate at any time.
- The Food Security Cabinet programme has installed weather monitoring equipment that is not currently integrated into the INAMET network.
- They currently have 3 IT staff, which is not enough to meet the needs of INAMET.

MINPET

Manuel Xavier Junior – National Director of Safety, Emergencies and Environment

- Most of Angola's aquatic pollution comes from offshore petroleum activities. The Director's job is to regulate and monitor environment and safety issues related to the petroleum extraction process.
- EIAs are required for any extractive project that petroleum companies want to develop.
- A National Oil Spill Contingency Plan has been developed so that the most sensitive environmental and social areas can be attended to first in case of an environmental emergency. The first phase (Cabinda to Luanda) has been completed. Local communities

are involved in this response plan, e.g. the boats of local fishers will be used to deploy booms into the sea.

- The MINTRANS and Ministry of Civil Protection are also involved in the steering committee that oversees petroleum issues in Angola.
- The Director has a database of oil companies, restaurants, bars, hotels and fisheries associations working in the coastal strip.
- CSI is not legislated for oil companies, but it is built into their contracts. CSI projects – such as building of schools – are not just in the coastal strip. However some oil companies do prefer projects in areas where they are operating. Sonangol, the national oil company, is responsible for identifying these CSI projects.
- The MoP wants to legislate CSI for oil companies, and this is likely to come into effect next year. Once this happens, the MoP is likely to be the entity that identifies potential CSI projects.

Annex C: Minutes of PPG Project Team Meeting

16/11/2014

In attendance: Abias Huongo (UNFCCC Focal Point), Catarina Dias (GAC), Carla Silver (advisor to Minister of Environment), Amaya Olivares Zapiain (UNDP), Nick Tye and Zoe Visser (C4 EcoSolutions).

Agenda:

1. Decide which of those baseline projects mentioned in the PIF are still relevant and identify alternative/ additional baseline projects;
2. Discuss the logframe and project activities;
3. Identify potential barriers;
4. Identify preliminary site selection criteria;
5. Note stakeholder meetings outstanding; and
6. Decide on project team deliverables and dates for inception and validation workshops.

1. BASELINE PROJECTS

It may be possible to get one co-financing letter from the Ministry of Planning, covering all of the baseline project. In order to do this, we need to justify which parts of the baseline budgets are relevant to us, and also give about 2 to 3 months to get this letter sorted out.

Baseline projects currently identified in the PIF

- Support to the Fisheries Sector (2012-2017), financed through the AfDB (~ US \$18.5 million) – co-financing might not be possible given that they have applied for a climate change component from GEF, also focussing on sustainable land restoration.
- Environmental Sector Support Project (PASA) (2010-2015), financed by AfDB (~ US \$12.3 million) – as above.
- The Local Development Project (FAS) 2010-2015 (LDP) financed by the World Bank (US \$ 121,7 million)
- The Angola Water Sector Institutional Project (PDISA) 2010-2019 with Southern African Development Community (total budget US \$113.4 million, financed by International Development Association (IDA) which has provided US \$57,4 million)
- UNDP may be able to provide USD 500 000 in co-financing through core sources.

Additional/ alternative baseline projects for discussion

- Integrated project for the protection and development of Angolan coastal forests (PIPDEFA), financed by EU and COSPE (~EUR 1.2 million)
- Conservation of forests in coastal areas and combatting desertification, financed by GoA and Israeli NGO
- Port construction at Bengo, MINTRANS, financed by GoA (total cost ~USD 2.7 million)
- Development of Artisanal Fisheries Plan (2014-2017), MINPES, financed by GoA. Abias says that this is a co-financing source.
 - Fisheries awareness raising and education, Development of Artisanal Fisheries and Aquaculture Institute
 - Other localised fishing projects

2. LOGFRAME AND PROJECT ACTIVITIES

Component 1 discussion:

- Need to articulate how additional weather stations will result in improved livelihoods for people
- Need to decide whether or not to include Benguela. Need to clarify about the role of agriculture.
- Add community early warning response plans as an output.
- Will need to get protocol of cooperation between ministries signed, as in the UNDP Cuvelei Project.
- This component should take cognisance of lessons learned from UNDP Cuvelei project component on EWS.

Component 2 discussion:

- Local NGOs should be involved in implementation.
- The MINTRANS should be engaged in any projects taking place in coastal areas, especially if we are working around the new port.
- Add an output on establishing a community management/ protected area management committee.
- FAO could assist with the farmer field school activity, either formally or as a knowledge-sharing exercise.
- Adding an output of concept notes for private sector to promote upscaling was discussed. The team liked the idea. Amaya suggested participatory filming as a way to document and promote a particular project.

Component 3 discussion:

- The first output should focus on the Inter-ministerial Committee for Biodiversity and Climate Change
- UNDP intend to hire an international technical expert to facilitate the outputs of Component 3. The salary cost will be split with the UNDP Cuvelei project, as there is a large amount of synergy with this project in terms of outputs and activities. Both projects strengthen capacity gaps within MINAMB.

3. POTENTIAL BARRIERS

- Limited monitoring stations/ equipment;
- Transport within and accessibility of pilot areas;
- Poor coordination between ministries when setting up meteorological monitoring;
- Limited staff and technical capacity in key institutions;
- Inadequate development planning in urban and rural areas;
- Inadequate guidance/ information to guide climate change planning;
- Lack of demonstration/ proof of concept of EbA interventions;
- Limited environmental stewardship/ awareness by local communities; and
- Limited knowledge of the benefits provided by intact ecosystems by local communities.

4. PRELIMINARY SITE SELECTION CRITERIA

- Coastal;
- Climate change vulnerability;
- Presence of target ecosystems;
- Community vulnerability (e.g. poverty, access to basic services, level of education);
- Absence of other projects addressing similar issues;
- Presence of existing community management structures (e.g. cooperatives, field schools) to facilitate implementation, especially those run by women;

- Number of beneficiaries, disaggregated by gender;
- Accessibility (cost-effectiveness);
- Potential for private-sector investment.
- Biodiversity co-benefits. Biodiversity co-benefits; and

Intervention selection criteria

EbA	Represents an EbA approach
	Increases potential for income generation/diversifies livelihoods
Cost	Cost-effectiveness
	Cost does not preclude the implementation of other interventions
Biodiversity, & Ecosystem goods/services	Conserves and strengthens biological diversity
	Promotes ecosystem good and services
Awareness & Information	Increases climate change awareness through community involvement
	Facilitates access to information about climate change and the uncertainty of future conditions
Economic	Does not generate influence, power and natural resource management inequities, which could be the source of social conflicts that obstruct the development of productive activities
	Safeguards lives and property
Cultural context	Understandable and easily applied by communities in their current context
	Contributes to social development goals such as gender equity and health
Implementation Capacity	Ease of implementation
	Degree of specialist knowledge/equipment required
Sustainability	Flexibility in the face of climate change
	Can be scaled-up for wider implementation

5. STAKEHOLDER MEETINGS OUTSTANDING

Abias suggested that Carla and Catarina undertake these meetings, using questions sent through from the C4 consultants.

- Ministry of Civil Protection;
- Ministry of Energy and Water;
- Minister of Fisheries (if required);
- COSPE;
- Institute for Agricultural Development;
- Ministry of Family and Women Promotion;
- Ministry of Health; and
- Adventist Development and Relief Agency.

6. PROJECT TEAM DELIVERABLES

Month	C4 EcoSolutions	Holisticos	Ministry of Environment
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November	30 - Mission Report	30 – Site selection criteria	
December	15 – Identification of baseline projects 15 - Draft 0 revised logframe		15 – Identification of baseline projects 15 – Letters of invitation for C4 consultants for visa purposes 24 – Review revised logframe
January	9 - Draft 1 revised logframe 9 – Draft 0 Results Framework (highlighting baseline information gaps) 9 – Draft 0 of budget (highlighting information gaps) 26 – Inception workshop presentation	9 – 1 st draft of Site selection report 9 – 1 st draft of intervention selection report (including cost-benefit analysis and analysis of climate-resilient livelihoods) 9 – 1 st draft of EWS baseline information and design requirements report (including preliminary costings) 15 – Preparation for Inception Workshop	9 – Preparations for the Inception workshop finalised 13 – Review of revised logframe, results framework, and budget
February	10 – 1 st draft of PD 15 – Validation workshop presentation	3 – 2 nd draft of Site selection report 3 – 2 nd draft of intervention selection report (including cost-benefit analysis and analysis of climate-resilient livelihoods) 3 – 2 nd draft of EWS baseline information and design requirements report (including preliminary costings)	3 – Preparations for the validation workshop finalised 20 – Review of 1 st draft of PD 28 – Letters of Cofinancing finalised and signed
March	5 – Full draft of PD 15 – Submission of PD to UNEP/UNDP for revision before validation workshop 30-Validation workshop		10 – Review of full draft of PD 28 – Final review of PD
April	Inclusion of comments from validation workshop Submission of final PD to UNDP and UNEP for internal clearance		
May	24 – Submission of PD to GEF		

Annex 3: Terms of Reference for project personnel

A 5.1 Terms of Reference for Project Steering Committee (PSC)

Background

The PSC will be responsible for undertaking management-related and technical decisions for the project in accordance with this ToR and providing guidance and direction for the project when required.

Tasks of the PSC will include *inter alia* approval of project plans, Annual Work Plans (AWPs) and revisions by UNEP, UNDP and the MINAMB. The committee will ensure a continued cohesion between the project and the mandate of the MINAMB. It will also provide additional linkages and interactions with high-level policy components within the Government. The PSC will approve the responsibilities of the Project Manager and intervene when conflicts within the project and between project members arise.

The PSC will comprise the following members:

- Secretary MINAMB (Chair);
- Members of CIBAC, including:
 - MINAMB;
 - MINAGRI;
 - MINEA (INRH);
 - INAMET;
- Government representatives of Cabinda, Bengo, Kwanza Sul and Namibe Provinces;
- Representatives of coastal communities; and
- UNEP and UNDP TM.

Scope of Work

Specific responsibilities of the PSC are as follows:

- Setting a strategic direction, reinforcing government leadership of the programme and coordinating all interventions.
- Providing guidance and agreeing on possible countermeasures/management actions to address specific risks.
- Approving the work plans prepared by the National Project Manager (prior to approval by UNEP and UNDP).
- Conducting regular meetings to review the progress of LDCF resources and providing direction and recommendations to ensure that the agreed deliverables are produced to a satisfactory standard.
- Reviewing and approving all activities that are supported by the project based on the project objectives, work plan and availability of funding.
- Providing technical advice to create synergy and uniformity between supported activities, policies and alignment projects.
- Monitoring and evaluation of programme activities through periodic meetings and occasional site visits.
- Receiving reports on all activities supported by the programme to serve as an additional basis for monitoring and assessing LDCF resources's performance and delivery.

A 5.2 Terms of Reference for Project Manager (PM)

Scope of Work

The National Project Manager will be recruited by MINAMB on a full-time basis to coordinate the implementation of LDCF resources under the guidance of the National Project Director. He/she will be accountable to the National Project Director for *inter alia*: i) the quality, timeliness and effectiveness of the interventions carried out; and ii) the use of project funds⁵⁵. The PM will report to the TA and the PSC.

Particular responsibilities of the PM include:

- Head the PMU.
- Report to the TA and the PSC regarding project progress.
- Oversee and manage project implementation, monitor work progress, and ensure timely delivery of outputs in accordance with GEF and UNEP/UNDP guidelines.
- Ensure timely preparation of detailed AWP and budgets for approval by PSC.
- Ensure timely preparation of detailed AWP and budgets for approval by PSC.
- Organise the PSC meetings.
- Deliver quarterly progress reports to the National Project Director, UNEP Task Manager and UNDP.
- Provide on-the-ground information for UNEP/UNDP progress reports.
- Provide technical support to the project, including measures to address challenges to project implementation.
- Supervise, coordinate and facilitate the work of the Project Administrative Assistant (PA), the Financial Manager (FM), the Technical Advisor (TA), field officers and the technical support unit (including national and international experts).
- Participate in training activities, report writing and facilitation of expert activities that are relevant to the National Project Manager's area of expertise.
- Establish linkages and networks with the ongoing activities of other government and non-government agencies. This will include meeting quarterly with the Project Manager of the Cuvelai Project to support alignment between the two GEF projects.
- Liaise and coordinate with UNEP TM on a regular basis.

Qualifications

- Master's degree in environment, natural resources management, coastal restoration or a closely related field.
- A minimum of 10 years relevant work experience including at least 6 years' experience as a lead project manager in relevant sectors.
- Demonstrated solid knowledge of adaptation to climate change, ecological restoration and sustainable exploitation of natural resources.
- Experience in the public participation development process associated with environment and sustainable development is an asset.
- Experience in working and collaborating within governments is an asset as well as experience in GEF projects.
- Fluent in Portuguese and English including writing and communication skills.

Reporting

The PM will work closely with the PSC, TA and the UNDP and UNEP TMs to ensure the availability of information on progress and performance regarding the implementation of the

⁵⁵ The Executing Agency is also accountable for the use of LDCF project funds.

project. The PM will deliver progress reports on a monthly basis to the TMs and the TA. These reports will include: i) status of activities; and ii) challenges encountered on the ground during project execution.

A 5.3 Terms of Reference for the Technical Adviser (TA)

The TA will provide technical guidance on the implementation of Component 3 to the PM. The position of TA will be filled by an international expert. The TA will work on a cost-sharing basis with the UNDP Cuvelai Project.

Duties and Responsibilities

Under the overall guidance of the UNDP Country Director and direct supervision of the Programme Specialist for Climate Change (UNDP Angola), the Adaptation to Climate Change Specialist (ACCS) will be internationally recruited by UNDP and she/he will be responsible for providing overall technical backstopping, monitoring and operational support to the above Projects. Among other specific tasks, the ACCS will coordinate the provision of the required technical inputs, reviewing and preparing Terms of Reference and reviewing the outputs of consultants and other sub-contractors. He/she will provide technical support to the National Project Director (Director of Climate Change Cabinet – Ministry of Environment) and to UNDP Angola on Adaptation issues. The ACCS also will lead in gathering information, analysis, and reporting to the Country Office and its partners.

To facilitate his/her functions, she/he will be based in Luanda with frequent travels to field sites.

Duties and Responsibilities

1. Provide technical and strategic assistance for project activities, including planning, monitoring and site operations;
2. Prepare and implement a capacity development plan on climate change adaptation;
3. Prepare Terms of Reference for consultants and sub-contractors, and assist in the selection and recruitment process;
4. Ensure quality control of interventions/outcomes/deliverables;
5. Support the Manager/national project coordinator, consultants and sub-contractors for the timely delivery of expected outputs, with international quality standards, and effective synergy among the various sub-contracted activities;
6. Assist the National Project Manager/coordinator by providing technical inputs during the preparation and revision of the Management Plan, Annual Work Plans, periodic reports such as the Combined Project Implementation Review/Annual Project Report (PIR/APR), inception report, technical reports, quarterly reports for submission to UNDP, the GEF, other donors and Government Departments, as required;
7. Assist the National Project Director (Director of Climate Change Cabinet – Ministry of Environment) in other Adaptation to climate change related issues, ensuring coordination among national interventions in the sector in liaison with project partners, donor organizations, NGOs and other groups to ensure effective coordination of project activities;
8. Assist in undertaking revisions in the implementation program and strategy based on evaluation results and orientations received from the National Director and the PSC;
9. Document lessons from project implementation and make recommendations to the Steering Committee for more effective implementation and coordination of project activities; and

10. Perform other tasks as may be requested by the National Project Director and/or by the UNDP CO.

Competencies

- Interacts, establishes and maintain effective working relation with a diverse team
- Displays a good understanding of issues related to protected areas and stakeholders engagement in GEF projects
- Works toward creative solutions by analyzing problems carefully and logically
- Sets priorities, produces quality outputs, meets deadlines and manages time efficiently
- Writes and speaks clearly and convincingly
- Practices attentive and active listening
- Responds positively to critical feedback and differing point of view
- Ability to communicate effectively in order to communicate complex, technical information to technical and general audiences
- Skills in negotiating effectively in sensitive situations
- Skills in achieving results through persuading, influencing and working with others
- Skills in facilitating meetings effectively and efficiently and to resolve conflicts as they arise

Required skills and experience

- At least an advanced post-graduate at or above M.Sc. level in climate change adaptation or a related Advanced university degree (Master or PhD) in a relevant field (ecology, natural resources management, rural development, meteorology, agronomy, etc.) with consistent professional specialization in issues of Adaptation to climate change (ACC).
- Extensive knowledge of ACC issues, including community involvement and capacity development, vulnerability assessments, integration of climate component into policies and strategies, ecosystem based adaptation, etc. Have at least 5 years of proven experience in the mentioned field;
- Previous experience on projects implementation (more than 4 years); with GEF funded projects will be an advantage;
- Previous experience in Africa; previous experience in Angola will be an advantage;
- Fluent in Portuguese and English (oral and written) is a requirement; candidates fluent in Spanish/English (oral and written) will be also taken into consideration.

The TA will cooperate with the PM to ensure the availability of information on progress and performance in the implementation of the project. In the performance of his/her duties, the TA will work in close collaboration with Monitoring and Learning Specialist, and update him/her on the progress of interventions under the UNDP component of LDCF resources.

A 5.4 Terms of Reference for the Monitoring and Learning Specialist (MLS)

Scope of Work

The MLS will be recruited by UNEP and probably be an International. She/he will be based in Luanda with regular field missions to project sites. He or she will manage the UNEP reporting requirements.

Responsibilities

- Provide quality assurance and technical review of project outputs.
- Undertake technical review of project outputs (e.g. studies and assessments).

- Write ToRs for technical consultancies with the NPM.
- Supervise the work of national and international experts.
- Assist in monitoring the technical quality of project (including AWP, indicators and targets).
- Conduct the financial administrative reporting and the PIR.
- Provide advice on best suitable approaches and methodologies for achieving project targets and objectives.
- Provide a technical supervisory function to the work carried out by the national and international experts hired by the project.
- Assist in knowledge management, communications and awareness raising.
- Facilitate the development of strategic regional and international partnerships for the exchange of skills and information related to climate change adaptation.

Qualifications

- At least an advanced post-graduate at or above MSc level in climate change adaptation or a related discipline such as disaster risk reduction, environmental management, natural resources management, agriculture, water resources management.
- A minimum of 5 years' experience in a senior technical lead position with planning and management of climate change adaptation and/or natural resources management programmes in developing countries.
- A minimum of 5 years in a senior technical position involved in institutional strengthening and capacity building.
- Previous similar experiences in provision of technical support to complex projects.
- Experience in the Southern African region would be an advantage.
- Good communication and computer skills.
- Fluent in spoken and written Portuguese and English.

Reporting

The MLS will report to the chair of the NPM. In addition, the MLS will cooperate with the NPM and TA to ensure the availability of information on progress and performance in the implementation of the project. In the performance of his/her duties, the MLS will work in close collaboration with the UNDP and UNEP TMs to update them on the project's progress.

A 5.5 Terms of Reference of the Finance Manager (FM)

The FM will be nationally recruited and report to the NPM. The FM will be familiar with both UNEP and UNDP financial administration procedures and financial reporting requirements. He or she will produce the necessary financial reports for both agencies.

Responsibilities

- Standardise the finance and accounting systems of the project while maintaining compatibility with the government and UNDPs financial accounting procedures.
- Prepare revisions of the budget and assist in the preparation of the AWP.
- Comply and verify budget and accounting data by researching files, calculating costs and estimating anticipated expenditures from readily available information sources.
- Prepare status reports, progress reports and other financial reports.
- Process all types of payment requests for settlement purposes including quarterly advances to the partners upon joint review.

- Prepare periodic accounting records by recording receipts, disbursements (ledgers, cashbooks, vouchers, etc.) and reconciling data for recurring or financial reports and assist in preparation of annual procurement plans.
- Undertake project financial closure formalities including submission of terminal reports, transfer and disposal of equipment, processing of semi-final revisions, and support professional staff in preparing the terminal assessment reports.
- Assist in the timely issuance of contracts and assurance of other eligible entitlements of the project personnel, experts, and experts by preparing annual recruitment plans.

Qualifications

- At least a post-graduate degree in accounting, financial management or a related discipline such as.
- A minimum of 5 years' experience in a senior finance position.
- Previous similar experiences working for International Organisations. Working for an UN agency would be an advantage.
- Experience with procurement processes an advantage.
- Good communication and computer skills.
- Fluent in spoken and written Portuguese and English.

A 5.6 Terms of Reference for the Project Administrative Assistant (PA)

Under the supervision of the NPM, a PA will be hired to directly support the National Project Manager with administrative tasks.

Responsibilities

- Report to the NPM
- Assist the NPM with PIRs, Project reports and the Project closure workshop.
- Assist the NPM with the preparation of visits to the project demonstration sites.
- Assist the NPM with daily administrative and logistical tasks.

Qualifications

- Bachelor degree in the field of natural resource management, environment or a related field.
- Experience working in the field of environment and sustainable development an asset.
- Experience in working and collaborating with local authorities an asset.
- Excellent knowledge of English and Portuguese including writing and communication skills.

A 5.7 General Terms of Reference for International Experts of the Support Team

Project implementation will be supported by **contractors**, selected according to UNEP and UNDP procurement rules. The MINAMB can contract other entities – defined as Responsible Parties – to undertake specific project tasks through a process of competitive bidding. However, if the Responsible Party is another government institution, Inter-governmental Organisation or a United Nations agency, competitive bidding will not be necessary and direct contracting will be applied. Confirmation of direct contracting will need to comply with comparative advantage, timing, budgeting and quality criteria. If direct contracting criteria cannot be met the activity will be open to competitive bidding.

The international experts will be hired to perform the following tasks:

- Collect data.
- Provide advice relevant to their field.

- Monitor interventions.

Additionally, the international consultants must be experts in their field. In addition, the international experts should have good knowledge and understanding of Angola's climate change risks. They should have an appropriate MSc degree and a minimum of 5 years' experience or an appropriate bachelor's degree and 10 years' experience in their field of expertise. Fluency in spoken and written Portuguese and English is required.

A 5.8 General Terms of Reference for National Experts of the Support Team

Local expertise will be sourced where possible in place of international expertise in order to strengthen in-country capacity. National experts will be hired by the project to:

- Collect data.
- Provide advice relevant to their field.
- Monitor interventions.

Additionally, the national experts must be experts in their field. Additionally, they should have good knowledge and understanding of Angola's climate change vulnerability and an appropriate MSc degree and a minimum of 5 years' experience or an appropriate bachelor's degree and 10 years' experience in their field of expertise. National experts need to be fluent in spoken and written Portuguese and English.

The hiring procedures to be followed for both international and national experts must include a transparent and competitive process based on normal UNEP and UNDP procedures.

Annex 4: Letters of co-financing





REPÚBLICA DE ANGOLA
MINISTÉRIO DA ENERGIA E ÁGUAS
GABINETE DO MINISTRO

Á
EXMA
SENHORA
NAOKO ISHII
DIRECTORA EXECUTIVA DO FUNDO
GLOBAL PARA O AMBIENTE
WASHINGTON, D.C.
U.S.A.

REF.^a 1743/GAB.MINEA/15

**ASSUNTO: PROJECTO "ANGOLA: NECESSIDADE DE DIRIGIR-SE
URGENTEMENTE A ADAPTAÇÃO DAS ORLAS COSTEIRAS E AS
LACUNAS DE CAPACITAÇÃO EM ANGOLA"**

Exma. Senhora,

O Ministério da Energia e Águas está a implementar o Projecto de Desenvolvimento Institucional do Sector de Água em Angola (PDISAA) financiado pela Associação Internacional de Desenvolvimento (AID) do Banco Mundial (BM). O projecto iniciou em 2010 e será implementado ao longo de um período de cinco anos. PDISAA fortalecerá a capacidade institucional e a eficiência das agências no sector da água para melhorar o acesso e a confiabilidade do fornecimento de água.

O projecto é composto por 4 componentes: i) o desenvolvimento de instituições no abastecimento de água e subsector de saneamento; ii) a gestão de recursos hídricos; iii) a reabilitação dos sistemas de abastecimento de água; e iv) a capacitação e gerenciamento de mudanças para fortalecer a habilidade do governo em melhorar o abastecimento de água.

O PDISAA, conforme descrito acima, está bem alinhado com o projecto financiado pelo GEF LDCF intitulado: "Necessidade de dirigir-se urgentemente a adaptação das orlas costeiras e as lacunas de capacitação em Angola". Particularmente, a componente 4 do PDISAA vai directamente ao encontro do projecto GEF LDCF.

MINISTÉRIO DA ENERGIA E ÁGUAS

Esta carta tem como finalidade confirmar que o Ministério de Energia e Água apoiará com USD 3.000.000,00 através da AID como co-financiamento para o projecto GEF LDCF em Angola. Esta colaboração proporcionará benefícios mútuos e reforço dos resultados para ambos os projectos.

Aproveitamos a oportunidade para reiterar-lhe os protestos da nossa elevada estima e consideração.

GABINETE DO MINISTRO DA ENERGIA E ÁGUAS, EM LUANDA AOS 16 DE NOVEMBRO DE 2015.


O MINISTRO
JOÃO BAPTISTA BORGES



REPÚBLICA DE ANGOLA
MINISTÉRIO DAS TELECOMUNICAÇÕES E TECNOLOGIAS DE INFORMAÇÃO
GABINETE DO MINISTRO

À
SUA EXCELÊNCIA
MINISTRA DO AMBIENTE
DR^a MARIA DE FATIMA JARDIM

LUANDA

S/Referência:

S/Comunicação:

N/Ref: 182/GAB.MTTI/2015

Assunto: PROJECTO ``ANGOLA: NECESSIDADE DE DIRIGIR-SE
URGENTEMENTE A ADAPTAÇÃO DAS ORLAS COSTEIRAS
E AS LACUNAS DE CAPACITAÇÃO EM ANGOLA``

Em atenção ao ofício n.º 683/10.21/GAB.MINAMB/15, somos a informar que, foi aprovado pelo Executivo, através do **Decreto Presidencial o Plano de Desenvolvimento Estratégico (PDE)**, para o INAMET financiado pelo Governo de Angola. O plano estará operacional durante o período de 2012-2018. O objectivo primário é o de tornar o Instituto Nacional de Meteorologia e Geofísica (INAMET) em uma Instituição Pública moderna e capaz de dar suporte ao desenvolvimento sustentável do País.

Consequentemente, o PDE tem 3 prioridades:

- i. **Promoção da boa governação e reforço da capacidade técnica do INAMET;**
- ii. **Aplicação de dados climáticos e geofísicos, para apoiar diversas actividades socioeconómicas;**
- iii. **Concepção de uma política de recursos humanos no INAMET, capaz de tornar o Instituto numa Instituição de investigação científica.**

O PDE descrito acima está, portanto alinhado com o projecto financiado pelo **GEF LDCF** intitulado: “Necessidade de dirigir-se urgentemente a adaptação das orlas costeiras e as lacunas de capacitação em Angola”.

Reiteramos o nosso compromisso no apoio ao desenvolvimento do projecto com os meios disponiveis e com as dotações refletidas no Orçamento Geral do Estado do Sector para 2016, nos seguintes projectos de actividade:

1. Est portal agrometereologico on line de apoio a Agricultura;
2. Estruturação do sistema de previsão do tempo;
3. Formação e capacitação de quadros;
4. Massificação do uso das TICs;
5. Operacionalização das infra-estruturas Institucionais;
6. Promoção e regulação do Desenvolvimento da Ciência e Tecnologia.

Cujo montante global dos projectos referenciados é de 922.429.051,00Kz (novecentos e vinte e dois mil e quatrocentos e vinte e nove mil e cinquenta e um Kwanza)

Queira aceitar as nossas cordiais Saudações.

GABINETE DO MINISTRO DAS TELECOMUNICAÇÕES E DAS
TECNOLOGIAS DE INFORMAÇÃO, em Luanda, aos 29 de Dezembro de 2015.-

O MINISTRO
JOSÉ CARVALHO DA ROCHA



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente
Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة

联合国环境规划署



Reference : DEPI/GEFCCAUC

1 March, 2016

Subject: UNEP co-financing commitment to the LDCF project "*Addressing Urgent Coastal Adaptation Needs and Capacity Gaps in Angola*"

UNEP helps developing countries to reduce vulnerabilities and build resilience to the impacts of climate change. UNEP builds and strengthens national institutional capacities for vulnerability assessment and adaptation planning, and supports national efforts to integrate climate change adaptation measures into development planning and ecosystem management practices. The project entitled "*Addressing Urgent Coastal Adaptation Needs and Capacity Gaps in Angola*" is built upon and contributes to the on-going projects and programs implemented by UNEP.

More specifically, this LDCF project will be aligned and build upon and provide mutual benefits to the UNEP-European Commission project on 'Building Capacity for Coastal Ecosystem-based Adaptation in Small Island Developing States (SIDS)' (2014-2016). This project will assist countries and regions develop and apply ecosystem-based adaptation approaches to maintain and enhance the resilience of tropical coastal ecosystems and the services they provide to coastal communities in SIDS. This project will contribute to building a knowledge portal and advisory tool for helping communities select EbA options. It has also produced a guide on 'Options for Ecosystem-based Adaptation in Coastal Environments' which will be promoted as a planning tool in this project as a broader guide for EbA interventions in Angola.

This letter serves to confirm UNEP's commitment to the above-mentioned GEF LDCF project to provide co-financing through the project detailed here. This project will contribute 150,000 USD in co-financing towards the LDCF project "*Addressing Urgent Coastal Adaptation Needs and Capacity Gaps in Angola*".

We look forward to your continued cooperation.

Yours sincerely,

Keith Alverson

Coordinator, Climate Change Adaptation & Terrestrial Ecosystem Branch

DIVISION OF ENVIRONMENTAL POLICY IMPLEMENTATION (DEPI)

P.O. Box 30552-00100, Nairobi, Kenya

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UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente

Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة

联合国环境规划署



Dr. Naoko Ishii
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Email: keith.alverson@unep.org

Annex 5: Social and Environmental Screening Template

[#]. Social and Environmental Screening Template

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document. Please refer to the [Social and Environmental Screening Procedure](#) for guidance on how to answer the 6 questions.]

Project Information

Project Information	
1. Project Title	Addressing urgent coastal adaptation needs and capacity gaps in Angola.
2. Project Number	5230
3. Location (Global/Region/Country)	Angola

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the Project mainstreams the human-rights based approach

The objective of the proposed LDCF project is to increase the capacity of coastal communities to adapt to climate change. Therefore, a human-rights approach is foundational to the project. Importantly, community-based management will be promoted by the project as a means of implementing an ecosystem-based approach to adapting to climate change. This approach supports local development. All project interventions have been developed in accordance with internationally proclaimed human rights, in conformity with UN guidelines. In addition, all activities were developed together with various stakeholders to ensure that no rights or laws are infringed by the proposed activities.

Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment

The outcomes of the proposed LDCF project will increase the adaptive capacity of local communities, and will support the diversification livelihoods. In particular, the project will focus on empowering women through these activities. For example, these stakeholders will play a role in the implementation of project activities, and will receive benefits from these activities. Moreover, gender-disaggregated indicators have been included in the Results Framework. Importantly, women in general and particular women's groups will be consulted at all stages of project implementation.

The effects of climate change are often more notable for women. For example, in rural communities, women and children frequently travel long distances to collect water. Consequently, the effects of decreasing surface water reserves are more notable in these areas, as the distances to be walked to collect this resource will lengthen. By increasing adaptive capacity of local communities in this area and contributing to water conservation – through EbA and sustainable agriculture – the opportunity costs incurred by women while undertaking these activities will be reduced.

Women's rights will be promoted in accordance with national legislation, appropriate strategies and UN guidelines for interaction within Angola. Importantly, the project is aligned with the National Gender Policy of 2011-2015. Gender has been taken into account throughout the project design and document including. Gender disaggregated indicators have also been incorporated.

Briefly describe in the space below how the Project mainstreams environmental sustainability

The objective of LDCF resources is to increase the adaptive capacity of coastal communities and government to climate change. Within Component 2, EbA and sustainable agriculture will be implemented and local communities will be trained to manage land sustainably. EbA is an inherently environmentally sustainable approach.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? <i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses).</i>	QUESTION 3: What is the level of significance of the potential social and environmental risks? <i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i>			QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?
Risk Description	Impact and Probability (1-5)	Significance (Low, Moderate, High)	Comments	Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.
Risk 1: Project leads to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups	I = 3 P = 1	Low	The project will implement activities for conservation. Consequently, there is a possibility that restriction will be applied to project interventions sites (e.g. livestock will not be allowed to graze in these sites).	Local communities will be involved in all stages of project design, thereby enabling them to plan effectively
Risk 2: Project potentially restricts availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups.	I = 1 P = 1	Low	This restriction might limit the activities of Angolans living in/near the intervention sites.	

Risk 3: Likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them.	I = 2 P = 2	Low	Although the project will promote a participatory process, involving as many local stakeholders as possible, there is always a possibility that local groups might feel excluded or not completely engaged. This is mostly because it is difficult to define precise boundaries for intervention sites. Consequently, it is difficult to identify direct beneficiaries.	The proposed LDCF project will adopt a participatory approach, involving as many local stakeholders and groups as possible. Community management committees will be created in Chiloango, Barra do Dande, Longa and Bero as a means of including coastal communities in the design and implementation of EbA interventions.
Risk 4: Duty-bearers do not have the capacity to meet their obligations in the Project.	I = 2 P = 3	Medium	LDCF resources is essentially a country-driven initiative. Therefore, Angolan stakeholders – including government and local communities – will be the ultimate duty-bearers. It is impossible to ensure, at PPG stage, that the capacity of all duty-bearers will be sufficient.	Institutional representatives at the validation meeting will agree upon the roles and responsibilities of each participating duty-bearer. Moreover, human resources capacity will be identified and developed as required.
Risk 5: Risk of introducing an invasive alien species.	I = 2 P = 1	Low	Conservation agriculture and agroforestry techniques will be promoted by the proposed LDCF project. Therefore, not all species of plant/tree that is used within the project will be indigenous.	Favorable and beneficial plant/tree species will be selected through detailed biophysical and socio-economic market assessments of plant species for use in EbA activities. Where possible, indigenous species will be prioritized.
Risk 6: Project involves harvesting of natural forests, plantation development, or reforestation	I = 1 P = 5	Low	The proposed project will implement EbA in mangroves. In addition, sustainable forestry will be implemented.	
Risk 7: Potential outcomes of the Project be sensitive or vulnerable	I = 3 P = 2	Medium	The project is restoring ecosystems in Angola that	Current climatic variability will be taken into when planning and implementing

to potential impacts of climate change.			could be compromised by climate change. Implementation of EbA and climate-resilient agriculture could also be effected by extreme climate events such as floods.	interventions. Moreover, resilient species will be selected for EbA and sustainable forestry to assist plant growth – particularly in the seedling and sapling stages – will be adopted.
Risk 8: Project possibly affects land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources.	I = 2 P = 2	Low	EWS, EbA and climate-resilient agriculture interventions will be implemented on land that is under community tenure. No effects on land tenure arrangements is anticipated.	
<ul style="list-style-type: none"> QUESTION 4: What is the overall Project risk categorization? 				
Select one (see SESP for guidance)				Comments
Low Risk			<input type="checkbox"/>	
Moderate Risk			<input checked="" type="checkbox"/>	Two medium risks have been identified.
High Risk			<input type="checkbox"/>	
QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?				
Check all that apply				Comments
Principle 1: Human Rights			<input checked="" type="checkbox"/>	1 risk identified
Principle 2: Gender Equality and Women's Empowerment			<input type="checkbox"/>	
1. Biodiversity Conservation and Natural Resource Management			<input checked="" type="checkbox"/>	1 risk identified
2. Climate Change Mitigation and Adaptation			<input checked="" type="checkbox"/>	1 risk identified
3. Community Health, Safety and Working Conditions			<input checked="" type="checkbox"/>	1 risk identified
4. Cultural Heritage			<input type="checkbox"/>	
5. Displacement and Resettlement			<input type="checkbox"/>	

	6.Indigenous Peoples	x	1 risk identified
	7.Pollution Prevention and Resource Efficiency	<input type="checkbox"/>	

Final Sign Off

Signature	Date	Description
QA Assessor		UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
Principles 1: Human Rights	Answer (Yes/No)
1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? ⁵⁶	No
3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	No
5. Are there measures or mechanisms in place to respond to local community grievances?	No
6. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	Yes
7. Is there a risk that rights-holders do not have the capacity to claim their rights?	No
8. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
9. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment	
1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
3. Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i>	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below	
Standard 1: Biodiversity Conservation and Sustainable <u>Natural</u> Resource Management	
1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?	No

⁵⁶ Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

<i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	
1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	Yes
1.3 Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4 Would Project activities pose risks to endangered species?	No
1.5 Would the Project pose a risk of introducing invasive alien species?	No
1.6 Does the Project involve harvesting of natural forests, plantation development, or reforestation?	Yes
1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	Yes
1.8 Does the Project involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	No
1.9 Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10 Would the Project generate potential adverse transboundary or global environmental concerns?	No
1.11 Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? <i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i>	No
Standard 2: Climate Change Mitigation and Adaptation	
2.1 Will the proposed Project result in significant ⁵⁷ greenhouse gas emissions or may exacerbate climate change?	No
2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	Yes
2.3 Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
Standard 3: Community Health, Safety and Working Conditions	
3.1 Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No

⁵⁷ In regards to CO₂, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

3.2 Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3 Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4 Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5 Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6 Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7 Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	Yes
3.8 Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No
3.9 Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage	
4.1 Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.2 Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement	
5.1 Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2 Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3 Is there a risk that the Project would lead to forced evictions? ⁵⁸	No
5.4 Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples	
6.1 Are indigenous peoples present in the Project area (including Project area of influence)?	Yes
6.2 Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3 Would the proposed Project potentially affect the rights, lands and territories of indigenous peoples (regardless of whether Indigenous Peoples possess the legal titles to such areas)?	No

⁵⁸ Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

6.4 Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.4 Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.5 Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.6 Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.7 Would the Project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	No
6.8 Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
Standard 7: Pollution Prevention and Resource Efficiency	
7.1 Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts ?	No
7.2 Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3 Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4 Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5 Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

Annex 6: Site selection Criteria

		Bero (Namibe)	Chiloango (Cabinda)	Longa (Kwanza Sul)	Barra do Dande (Bengo)	Soyo (Zaire)	Barra do Kwanza (Luanda)	Giraúl (Namibe)
Coastal		✓	✓	✓	✓	✓	✓	✓
Climate change vulnerability		High	High	High	High	Med-low	High	Med-low
Presence of target ecosystems		Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands
Community vulnerability (e.g. poverty, access to basic services, level of education)		High	High	High	High	Med-low	High	Low
Absence of other projects addressing similar issues		Absence	Absence	Absence	Absence	Absence	Absence	Absence
Presence of existing community management structures (e.g. cooperatives, field schools) to facilitate implementation, especially those run by women		One agricultural cooperative	None	Local leader	A number of cooperatives and associations	One informal grouping of artisanal fishers	None	None
Number of beneficiaries, disaggregated by gender	Direct	**	*	***	***	*	*	*
	Indirect	**	****	***	****	*	*	*
Accessibility (cost-effectiveness)		✓	○	○	✓	○	○	X
Potential for private-sector investment		Likely	Likely	Likely	Likely	Unlikely	Likely	Unlikely
Biodiversity co-benefits		✓	✓	✓	✓	✓	✓	✓
		Selected	Selected	Selected	Selected	Not	Not	Not Selected

					selected	Selected	
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Key: Number of beneficiaries, disaggregated by gender

Symbol	Number (individuals)
*	0–100
**	101–5000
***	5001–20000
****	>20000

Key: Accessibility (cost-effectiveness)

Symbol	Category of accessibility
✓	Well tarred road
○	By 4x4 or boat only, or the combination of both
X	Inaccessible

Annex 7: Tracking Tool for Climate Change Adaptation Projects

Project Identification			
Project title:	Addressing Urgent Coastal Adaptation Needs and Capacity Gaps in Angola		
Country:	Angola	GEF Project ID:	5230
GEF Agency	UNEP, UNDP	Agency Project ID:	00092471
Executing Partners:	MINAMB	Council/CEO Approval date	
Project status at submission		Tool submission date:	

Project baselines, targets and outcomes						
Objective 1: Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate						
Outcome 1.3: Climate resilient technologies and practices adopted and scaled up						
Indicator	Unit of measurement	Baseline at CEO Endorsement	Target at CEO Endorsement	Actual at mid-term	Actual at completion	Comments (e.g. specify unit of measurement)
Indicator 4: Extent of adoption of climate-resilient technologies/practices	number of people	0	500			
	% female	0	30%			
	% of targeted	To be determined from site reports	~1%			
	number of hectares (mangrove restored)	0	561			
	% of targeted	0	N/A			

Objective 2: Strengthen institutional and technical capacities for effective climate change adaptation						
Outcome 2.1: Increased awareness of climate change impacts vulnerability and adaptation						
Indicator	Unit of measurement	Baseline at CEO Endorsement	Target at CEO Endorsement	Actual at mid-term	Actual at completion	Comments (e.g. specify unit of measurement)
Indicator 5: Public awareness activities	Yes/No	No	Yes			
	number of people	0	1000			

carried out and population reached	% female	0	50			
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Objective 3: Integrate climate change adaptation into relevant policies, plans and associated processes						
Outcome 3.1: Institutional arrangements to lead, coordinate and support the integration of climate change adaptation into relevant policies, plans and associated processes established and strengthened						
Indicator	Unit of measurement	Baseline at CEO Endorsement	Target at CEO Endorsement	Actual at mid-term	Actual at completion	Comments (e.g. specify unit of measurement)
Indicator 11: Institutional arrangements to lead, coordinate and support the integration of climate change adaptation into relevant policies, plans and associated processes	Frequency of annual meetings of CIBAC inter-ministerial commission on biodiversity and climate change	No regular, systematic meetings	At least 3 CIBAC meetings planned per year			

Annex 8: Map of Angola detailing LDCF intervention sites



Annex 9: Ongoing and related initiatives

The LDCF-funded UNDP project **Promoting Climate-Resilient Development and Enhanced Adaptive Capacity to Withstand Disaster Risks in Angola's Cuvelai River Basin (2014–2017)** (US\$4,416,210) is a climate change adaptation initiative which addresses climate-related vulnerabilities through on-the-ground investments and capacity building of GoA and local communities. Components of this project include: i) transferring technologies – and related capacity building – for climate and environmental monitoring; ii) enhancing sustainable rural livelihoods; and iii) increasing understanding of climate change adaptation and practices amongst local communities and government. Component 1 of LDCF-financed project is aligned with the Cuvelai project, which contributes to the development of comprehensive famine and flood early warning systems in the Cuvelai Basin. Lessons learned from the Cuvelai project have been integrated into the design of LDCF resources. Moreover, the project will be emulating some of the Cuvelai project's early warning interventions in Barra do Dande. The Technical Advisor – who will be giving in-depth technical input to the CCBA under Component 3 and technical oversight on Components 1 and 2 – will be hired on a cost sharing basis between the Cuvelai project and LDCF-financed project.

163. The FAO climate change adaptation project entitled **“Integrating and Up-Scaling Climate Resilience into Agricultural and Agropastoral Production Systems through Soil Fertility Management in Key Productive and Vulnerable Areas Using the Farmers Field School Approach** is currently at PIF stage (US\$4,416,210). The overall objective of the project will be to increase the resilience of small-scale farmers to climate variability and extreme weather events, as well as the consequent degradation of ecosystems. This initiative will be based in the Central Plateau interior of Angola while LDCF resources will be based in the country's coastal areas. However, there are opportunities for engagement and sharing lessons learned between the two projects. In particular, lessons learned from this FAO GEF project will inform the design and implementation of climate-resilient agriculture interventions under Component 2 of LDCF resources.

164. The FAO project entitled **“Enhancing Climate Change Resilience in the Benguela Current Fisheries System” (2012–2017)** (US\$4,725,000) is a GEF LDCF-funded climate change adaptation project which is currently implementing participatory adaptive strategies to promote food and livelihood security in the coastal regions of Angola. This project consists of four Components: i) integrating fisheries climate change considerations into fisheries policies and planning and into broader inter-sectoral policies and programmes; ii) piloting improved climate-resilient fisheries practices; iii) building capacity and promoting improved climate-resilient fisheries practices; and iv) monitoring and evaluation. Given that they are both implementing interventions in the coastal zone, the LDCF and FAO projects offer many linkages and opportunities for cooperation. During implementation, FAO project managers will be consulted to promote synergies and avoid duplication of interventions. In particular, LDCF project activities to strengthen institutional capacity of local organisations – such as the Committee of the Environment – will complement similar activities under Component 3 of the FAO project.

165. The **Environmental Sector Support Project (PASA) (2010–2015)** (US\$12,314,814) is a nation-wide project funded by AfDB, with counterpart funding from GoA. Initially, this project included three components: i) environmental governance, capacity building and institutional strengthening; ii) integrated environmental conservation and natural resource management; and iii) project management. Thereafter, an additional component related to climate change – approved

and funded by GEF (Climate Change) – was incorporated into this project. With GEF support, the project includes interventions to strengthen the institutional capacities of the Ministry of Environment (MINAMB), MINAGRI, NGOs and CSOs to manage the effects of climate change. Additionally, the capacity of local communities to adapt to climate change is being strengthened through training, and dissemination of adaptation technologies and guidelines. LDCF resources will develop the capacity of the CCG – which is based within MINAMB – to manage climate change adaptation at a national level.

166. The AfDB/GEF (LDCF project **Integrating Climate Change into Environment and Sustainable Land Management Practices** (US\$6,668,182) has three components: i) governance, capacity building and institutional strengthening; ii) integrating climate adaptation measures into SLM practices in four demonstration sites – Namibe, Huambo, Kuando Kubango and Cabinda; iii) knowledge management through a coordination mechanism with other projects; and iv) monitoring and evaluation. LDCF resources will undertake EbA and climate-resilient agriculture interventions in Namibe and Cabinda. These interventions will align with the SLM interventions of the AfDB project.

167. The UNEP GEF-LDCF project **Umbrella Programme for National Communication to the UNFCCC** (US\$11,330,000) will strengthen the capacity of the institutions involved in the development of national communications on climate change. Moreover, this initiative will enhance the base of information related to climate change and adaptation. Strengthened capacity and an enhanced knowledge base will support the integration of adaptation priorities into development strategies and programs. Additionally, the programme will promote best practices for disseminating information on climate change amongst national and sub-national institutions. Through Component 3 of LDCF resources, the technical and institutional capacity of the GoA to manage climate change – including integrating adaptation into national policies and plans – will be strengthened. Therefore, LDCF resources is aligned with the Umbrella Programme. During implementation, stakeholders from this programme will be consulted to avoid duplication of capacity-building activities.

168. Two important ongoing GEF-funded initiatives which will be aligned with this GEF LDCF funded projects are the global adaptation projects related to the advancement of the National Adaptation Plans (NAPs) of LDCs. The UNDP/UNEP GEF-LDCF funded project entitled **Assisting LDCs with Country-driven Processes to Advance National Adaptation Plans (NAPs)** (US\$1 998,000) will strengthen policies and institutional capacities at national and decentralised levels in multiple LDCs, with the objectives of promoting long term adaptation planning and therefore low carbon and climate-resilient human development through initiating the NAP process. The UNDP/UNEP-LDCF project **Expanding the Ongoing Support to LDCs with Country-driven Processes to Advance the National Adaptation Plans (NAPs)** (US\$6,200,000) will strengthen the institutional and technical capacities of LDCs to start and/or advance their NAP process. This will be achieved by enhancing the capacity of participating countries to advance both medium- and long-term adaptation planning in the context of national development strategies and budgets. These activities of these NAP projects will harness and make available the tools and approaches needed to support and implement elements of the NAPs, with a particular emphasis on planning for long-term climate change trends within ongoing national planning. This LDCF project will complement both aforementioned projects – that support adaptation planning in the medium and long term – by increasing the capacity of the GoA to adapt to the immediate and short-term effects of climate change, particularly by responding to the priorities outlined in the NAPA.

169. The objective of the FAO GEF Land Degradation/LDCF project **Land Rehabilitation and Rangelands Management in Smallholders Agro-pastoral Production Systems in South**

Western Angola (US\$3,013,636) is to enhance the capacity of South Western Angola's small holders' agro-pastoral sector to mitigate the effects of land degradation. This objective will be achieved by mainstreaming SLM practices into agro-pastoral and development initiatives. LDCF resources will be informed by lessons learned from the FAO project's integration of SLM into local initiatives.

170. The **Local Development Project (FAS) (2010–2015)** is funded by the GoA, the WB and the European Union. This project has three components: i) increasing poor households' access to improved social and economic infrastructure by financing the rehabilitation and construction of basic public works and municipal grants; ii) promoting Local Economic Development by developing business skills and participation in markets of selected producer groups; and iii) strengthening capacity of local institutions, public entities and civil society to plan, manage and monitor basic public service delivery and expenditure. The LDP is being implemented in 17 provinces, four of which are provinces where the intervention sites for the proposed LDCF project are located – Bengo, Namibe, Cabinda and Kwaza Sul. LDCF resources will also promote food security and environmental infrastructure in these coastal provinces through EbA and climate-resilient land management activities. Consequently LDCF resources will benefit from the investments of the LDP in local capacity-building, both at the level of communities as well as sub-national government.

Annex 10: Description of project intervention sites and EbA and climate-resilient land management interventions.

Baseline situation at each project site

171. In the southern-most Cabinda Province, the village situated at the Chiloango River mouth is negatively impacted by the rapidly declining condition of the adjacent wetland. The flow of water from this wetland has been restricted by the deposition of silt from degraded upstream watersheds as well as waste and detritus from nearby settlements. An additional factor which has contributed to the degradation of this wetland is pollution from upstream users such as the petroleum industry. Villagers report that stagnation of the wetland – as a result of pollution – has resulted in a sharp decline in local fish and crustacean stocks upon which they depend for their livelihood and food security. Additionally, poor drainage of the wetland exacerbates the risk of flooding at the river mouth adjacent to the village. The condition of mangroves that currently buffer the community from storm surges and floods is further aggravated by the poor circulation of stagnant water through the wetland. Community members have begun the excavation of a basic drainage channel between the wetland and the ocean, however it is not clear whether this approach is likely to solve the problem or result in further environmental degradation.

172. Households in the Chiloango village practice subsistence agriculture to supplement a fish-based diet. Small amounts of fruit and vegetables – such as mangoes, bananas, corn, tomatoes and sweet potatoes – are grown in family plots to supplement a fish-based diet. Many households in the village are also reliant on illegal hunting as a source of supplementary income in order to purchase charcoal and food from larger neighbouring settlements. At present, the productivity of agriculture in the area is relatively low as a result of inefficient practices and limited access to inputs. Consequently, the yields of fruit and vegetables are inadequate to meet the subsistence needs of the community. Additionally, the widespread practice of cultivating land adjacent to river banks is likely to further undermine the agricultural output and food security of Chiloango households, as the risk of flooding and crop damage in these areas is predicted to increase as a result of climate change.

173. In the Bengo Province, communities in the vicinity of the Dande River mouth and upstream areas are particularly vulnerable to climate-related hazards such as flooding. The Dande River is particularly negatively affected by deposition of sediment and silt from upstream areas, to the degree that deposition of sediment in the Dande River mouth has created a new landmass. As a result of the settlement of housing in low-lying areas, flooding of houses and infrastructure is common. To date, this area has not experienced any catastrophic flood events comparable to the recent March 2015 floods that caused significant loss of life in Lobito and Benguela cities in the Benguela Province. However, the communities in the vicinity of Dande River are potentially vulnerable to floods of similar severity. In addition to the direct hazard of floods, the food security of communities in this area is particularly vulnerable to climate-related shocks to the agriculture and fishery sectors. The majority of households in the Dande community are dependent on livelihoods related to artisanal fishing. However, local fishers report that it has become necessary to travel further out to sea as a result of declining fish stocks near the shore. The decline in fish stocks is attributed to the degradation of local ecosystems, including the mangrove wetlands and estuaries which are important breeding grounds for commercially valuable fish species. Subsistence agriculture is practiced by some households a few kilometres upstream of the river mouth, however the downstream areas are largely uncultivated as a result of waterlogging and poor soil quality.

174. A factor which further increases the vulnerability of communities in the Dande River area to climate change is the degradation of ecosystems which would otherwise provide a degree of protection against the impacts of climate change. For example, the mangroves that buffer communities on the north banks of the river against storm surges have become degraded as a result of expansion of the settlement. The local municipality has established two small dump sites close to the river mouth in an effort to reduce the challenge of litter, however communities are not making use of these dump sites. Consequently, mangroves on the south banks of the river have been degraded by deliberate dumping of waste as well as deposition of water-borne human waste and detritus by the rising tide. As a result of the widespread degradation of these ecosystems, people living in the Dande settlement are likely to be negatively affected by increased storm surges and flooding under climate change.

175. In the Kwanza Sul Province there are three villages in the vicinity of the Longa River mouth, namely Calamba, Simão and Hojúa. These low-lying coastal villages are particularly vulnerable to flooding and storm surges – these risks are likely to increase under conditions of climate change. The vulnerability of these villages to flooding and storm surges is exacerbated by the degradation and removal of mangroves and riparian forest from the banks of the Longa River, which is primarily driven by the demand for woodfuel and building materials. However, these pressures have been reduced in The NAPA and the First National Communication have shown that climate change is negatively impacting coastal communities in Angola, including those living in Chiloango, Barra do Dande, Longa and Bero. In particular, rainfall variability is resulting in more frequent and severe drought and floods episodes. It is predicted that these effects will worsen in the future⁵⁹, especially in southern parts of the coast. The livelihoods of the rural coastal communities in the abovementioned sites are underpinned by ecosystem services. In particular, these communities depend strongly on artisanal fishing, supplemented by subsistence agriculture and commercial hunting for the bush meat market⁶⁰. Given their reliance on natural resources, these communities are becoming increasingly vulnerable because of the climate-related changes to coastal ecosystems. The baseline situation at each of the four project sites is described below.

176. In recent years as a result of the availability of alternative building materials and charcoal produced outside of the area. The degradation and removal of vegetation from river banks and surrounding areas is also partly attributable to excessive grazing and trampling by livestock, particularly cattle and goats, which graze and drink water around the Longa River mouth. This contributes to soil erosion along the river and estuary and affects water quality negatively. Commercial and subsistence agriculture is practiced extensively in the area. Subsistence farmers rely on rainfall and flooding to irrigate their crops and – despite the abundance of cattle dung – no fertilisation of fields is practiced. Consequently, yields of locally grown vegetables – such as tomatoes, potatoes, onions and cassava – are inadequate to meet the subsistence needs of the community.

A local conservation initiative – the Kitabanga Project – provides employment and environmental education to local communities to preserve the local estuaries in which sea turtles breed. However, there is no running water, electricity, sewerage, or waste collection system for the three villages. Consequently the wetlands are negatively affected by deposition of waste and untreated sewerage, which creates a health hazard and also reduces the productivity of local fisheries. Artisanal fishers report that the size of their catch has reduced considerably in local years, forcing them to travel further out to sea. Therefore any negative impacts on the productivity of fisheries has particularly severe implications for these already-impooverished fishing communities.

⁵⁹ UNFCCC. (2011). Angola: National Adaptation Programme of Action. See: <http://unfccc.int/resource/docs/napa/ago01.pdf> Accessed 20 October 2014.

⁶⁰ which is currently illegal but with not enforced.

177. The northernmost project site is in the Namibe Province. In 2003, there was a catastrophic flood at the Bero River mouth that resulted in loss of life and destruction of the settlement. Approximately 2,000 people were resettled. In recent years, people have moved back into the area to practice commercial and subsistence agriculture. In an effort to reduce the risk and severity of flooding, protective dykes were constructed across an extent of 10 km inland from the river mouth. The dyke barriers provide protection against flash floods, however households in this area are still affected by slow-onset flooding during periods of extended rainfall. It is anticipated that flooding is likely to become more frequent in the future owing to greater intensity of rainfall under climate change. The severity and frequency of flooding in these areas is exacerbated by the destruction of vegetation on the river banks. The ecosystem at the river mouth is comprised of coastal lagoons, mudflats and a marshlands. This estuarine area will help to prevent coastal erosion caused by storm surges under conditions of climate change. In addition, the health and integrity of these ecosystems is threatened by multiple pressures including *inter alia*: i) eutrophication resulting from inappropriate fertiliser application by commercial farmers upstream; ii) pollution with solid waste; and iii) earth-moving works for construction of commercial properties along some parts of the river.

178. There is an urgent need to introduce innovative practices for climate change adaptation to reduce the vulnerability of coastal communities living in Chiloango, Barra do Dande, Longa and Bero to the negative effects of climate change. Currently, projects that focus on climate change adaptation – such as the COSPE project for the protection and development of Angolan coastal forests – are being implemented in areas outside of these targeted intervention sites (see Section 2.2.2). In general, these projects are promoting climate-resilient agriculture and the integration of related interventions into existing agricultural practices. No previous or ongoing initiatives have demonstrated the EbA approach in Angola's coastal areas. Additionally, although there are some ongoing initiatives which are focused on the development the livelihoods of artisanal fishers living along the Angolan coast⁶¹ including the FSSP, these initiatives do not take the effects of current and future climate change into consideration. Consequently, there is a risk that the on-the-ground activities of these initiatives will not be successful under future conditions of climate change.

EbA interventions of LDCF project

179. Under Output 2.1, appropriately skilled and experienced organisations will be contracted to implement the project's EbA interventions in Chiloango, Barra do Dande, Longa and Bero. Protocols will be developed by an EbA expert to ensure that project activities are aligned with best practices for EbA. These protocols will be based on: i) field-based assessment surveys of intervention sites; ii) predicted climate trends; iii) examples of EbA best practices identified by similar projects in southern Africa; and iv) lessons that have been learned and tools that have been developed by other aligned projects in Africa. Importantly, EbA interventions will be focus on mangrove and wetland ecosystems and will emphasise the selection of multi-use, climate-resilient plant species.

180. The participation of communities in the implementation of EbA and climate-resilient land management practices will be strengthened through the establishment of community management committees at the project's intervention sites. Importantly, the organisations that are appointed to implement EbA will include representatives of these community management committees in the identification of pilot sites and priority activities for EbA interventions, including *inter alia* wetland restoration, mangrove restoration and re-vegetation of degraded areas.

⁶¹ These projects are working with fisher cooperatives. Fishers are moving away from associations and towards cooperatives as a means of organising themselves. A law will soon be approved to strengthen cooperatives as legal entities, enabling them to access more government funding support.

181. At the Chiloango River mouth in the Cabinda Province, LDCF project interventions will include restoration of 400 hectares of degraded wetland (including mangroves). Restored mangroves will protect infrastructure, households and farmlands in the vicinity of the river mouth from damage caused by storm surges and flooding. Additionally, the restoration of degraded wetlands will support the livelihoods of local households by increasing the productivity of fisheries through increased breeding habitat for commercially valuable fish and crustacean species.

182. At the Barra do Dande in the Bengo Province, LDCF project interventions will include restoration of 10 hectares of degraded wetland (including mangroves). The degradation of these mangroves can be partly attribute to improper disposal of waste generated by settlements adjacent to the river. Therefore, the project's activities will include the removal of accumulated waste and litter that has been dumped at the mangrove site. Additionally, under Outcome 2.2, the project will support the local municipality to develop a comprehensive waste management plan for the area to reduce re-contamination of the restored mangroves. Furthermore the project will introduce complementary activities to restore and replant degraded mangroves in order to improve the health of the fish nursery and increase fish stocks in the area. The improved productivity of local fisheries will improve the livelihoods and food security of artisanal fishers in the area.

183. At the Longo River mouth in the Kwanza Sul Province, LDCF project interventions will include restoration of 41 hectares of wetland (including mangroves). Restored mangroves will help to buffer the village located at the river from increased storm surges under climate change. Additionally, degraded parts of the wetland adjacent to the Longa settlement will be restored in order to: i) mitigate flooding in the area; ii) increase the availability and quantity of NTFPs, fish and crustaceans available to local communities.

184. At the Bero River mouth in Namibe Province, LDCF project interventions will include restoration of 110 hectares of degraded wetland (including riverine and estuarine) areas. These EbA interventions will reduce the severity of flooding and stabilise the shoreline against erosion from increased storm surges and sea level rise under future climate change scenarios. These interventions will complement the protective dykes that have already been established as a protection measure against flash floods.

185. At all project sites, sub-committees will be established within community management committees to focus on specific elements of the management plan such as: i) implementing activities to patrol and monitor the surrounding area to prevent illegal harvesting; and ii) waste management; and iii) water quality monitoring. The water quality sub-committee will be supported to establish a simple water system for monitoring of water quality. The Project Unit will collaborate with the Environmental Quality Lab in Cabinda – a government lab funded by the petroleum industry – to share the results of water quality tests for hydrocarbon and chemicals. Additionally, the project will engage with upstream water users in the agriculture and petroleum sectors to increase awareness on topics such as the negative effects of chemical pollution on local ecosystems and the benefits of the EbA approach.

Climate-resilient land management interventions of LDCF project

186. Under Output 2.2, climate-resilient land management techniques will be demonstrated in participation with communities in Chiloango, Barra do Dande, Longa and Bero. Demonstration plots will be established at each of these sites to showcase examples of climate-resilient

agricultural practices. A combination of techniques and practices have been proposed for each project site based on detailed site studies (described below).

187. The main source of income and sustenance for villagers living near the Chilaongo river mouth is artisanal fishing. In addition, subsistence agriculture from family plots provides fruit and vegetables. However, the productivity of agriculture is inadequate to meet the needs of the community as a result of poor soil quality and the widespread reliance on unsustainable agricultural techniques. Increased flooding and irregularity of rainfall under future climate change scenarios is likely to further reduce agricultural yields. Therefore the project's interventions will include the demonstration of climate-resilient land management practices such as: i) introduction of flood- and drought-resistance fruit and vegetable varieties to family plots; ii) introduction of climate-resilient agricultural techniques such as organic composting; and iii) establishment of a small woodlot to promote increase the availability of sustainable woodfuel. The project's focus on increasing the productivity of subsistence agriculture is particularly important in consideration of the reduced productivity of fish stocks, and resultant impacts on food security, reported by local communities in Chiloango.

188. At the Barra do Dande in the Bengo Province, the project's activities will include providing assistance to the local municipality to develop a comprehensive waste management plan to restore and protect degraded mangroves. Mangrove restoration and improved waste management will improve the health of the fish nursery and therefore increase fish stocks in the area. This will improve the livelihoods of artisanal fishers operating in the area. The project will also promote improved practices for climate-resilient agriculture, including *inter alia* establishment of an irrigation system for small scale farmers and introduction of drought- and flood-resistant crops, thereby increasing the productivity of local subsistence agriculture. Consequently, the project's activities will contribute to increased food security in the area, even under conditions of increased drought and flooding.

189. At the Longa River mouth in the Kwanza Sul Province, the project will implement climate-resilient approaches for agriculture interventions to compliment EbA interventions and promote food security, such as: i) instillation of a drip irrigation system; ii) introduction of organic composting techniques; and iii) promotion of flood- and drought-resistant vegetable and fruit cultivars. Furthermore, practices for sustainable management of pastures and livestock grazing will be introduced to reduce the erosion of soils by over-grazing and increased intensity of rainfall.

190. At the Bero River mouth in Namibe Province, climate-resilient land management interventions will be implemented to compliment EbA interventions and promote food security under worsening drought and flood conditions. Subsistence agricultural production is currently dependent on fluctuations in river flow. Introduction of a drop irrigation system would therefore increase the resilience of substance farmers to drought and flood while improving water efficiency. Additionally, drought-resistance crops identified in Activity 2.1.2 will be introduced to farmers. Several spur dikes are currently used to trap nutrient-rich residuals, which are collected by farmers and used as natural fertilizers. Construction of several more dykes is an addition means of promoting climate-resilient agriculture and reducing nutrient-leaching along the riverbanks.

Annex 11: Budget by project components and UNEP budget lines

ANNEX F-1 - RECONCILIATION BETWEEN GEF ACTIVITY BASED BUDGET AND UNEP BUDGET LINE (GEF FUNDS ONLY US\$)															Notes
Project title:			Addressing urgent coastal adaptation needs and capacity gaps in Angola												
Project number:			5276												
Project executing partner:		Ministry of Environment (MINAMB)													
Project implementation period:			Expenditure by project component/activity						Expenditure by calendar year						
From:	2016														
To:	2019		Outcome 1	Outcome 2	Outcome 3 + 4	PM	M&E	Total	Year 1	Year 2	Year 3	Year 4	Total		
UNEP Budget Line															
10	PERSONNEL COMPONENT														
	1100	Project personnel													
	1101	National Project Manager	54 000	126 000	36 000			216 000	54 000	54 000	54 000	54 000	216 000	28,42,47	
	1102	Project driver		72 000				72 000	18 000	18 000	18 000	18 000	72 000	34	
	1199	Sub-total	54 000	198 000	36 000	-	-	288 000	72 000	72 000	72 000	72 000	288 000		
	1200	Consultants													
	1201	National Industry Expert - Agriculture	6 000					6 000	6 000	-	-	-	6 000	2	
	1202	National Industry Expert - Fisheries	6 000					6 000	6 000	-	-	-	6 000	3	
	1203	National Industry Expert - Transport	6 000					6 000	6 000	-	-	-	6 000	4	
	1204	National Industry Expert - Environment	6 000					6 000	6 000	-	-	-	6 000	5	
	1205	National Industry Expert - Tourism	6 000					6 000	6 000	-	-	-	6 000	6	

	1206	International meteorological/ EWS specialist	64 000					64 000	34 500	29 500	-	-	64 000	10
	1207	INAMET technician	3 000					3 000	3 000	-	-	-	3 000	11
	1208	National EWS consultant	20 000					20 000	-	10 000	10 000	-	20 000	19
	1209	International EbA/ agriculture specialist		76 640				76 640	46 917	21 473	4 400	3 850	76 640	21
	1210	Community engagement specialist		38 880				38 880	14 144	15 552	4 592	4 592	38 880	22
	1211	Monitoring and learning specialist		153 000				153 000	39 500	39 500	37 000	37 000	153 000	31
	1212	International Technical Advisor			471 074			471 074	117 769	117 769	117 769	117 767	471 074	37
	1213	International Adaptation economics/ Policy Expert			90 000			90 000	7 500	37 500	32 000	13 000	90 000	39
	1214	National Adaptation economics/Policy Expert			35 000			35 000	-	25 000	10 000	-	35 000	39
	1299	Sub-total	117 000	268 520	596 074	-	-	981 594	293 330	296 294	215 761	176 209	981 594	
	1300	Administrative Support												
	1301	Finance Manager	42 000			126 000		168 000	42 000	42 000	42 000	42 000	168 000	15
	1302	Project Assistant				72 000		72 000	18 000	18 000	18 000	18 000	72 000	49
	1399	Sub-total	42 000	-	-	198 000	-	240 000	60 000	60 000	60 000	60 000	240 000	
	1600	Travel on official business												
	1601	Travel to EWS sites	3 000					3 000	1 800	1 200	-	-	3 000	13
	1602	Travel for EbA		31 680				31 680	7 920	7 920	7 920	7 920	31 680	36
	1603	Travel for TA			20 000			20 000	5 000	5 000	5 000	5 000	20 000	46
	1699	Sub-total	3 000	31 680	20 000	-	-	54 680	14 720	14 120	12 920	12 920	54 680	
1999	Component total		216 000	498 200	652 074	198 000	-	1 564 274	440 050	442 414	360 681	321 129	1 564 274	
20	SUB-CONTRACT COMPONENT													

	2100	Sub-contracts (MOUs/LOAs for cooperating agencies)												
	2101						-						-	
	2199	Sub-total	-	-	-	-	-	-	-	-	-	-	-	
	2200	Sub-contracts (MOUs/LOAs for supporting organizations)												
	2201	National academics		60 000			60 000	-	20 000	20 000	20 000	60 000	30	
	2299	Sub-total	-	60 000	-	-	60 000	-	20 000	20 000	20 000	60 000		
	2300	Sub-contracts (for commercial purposes)												
	2301	Vulnerability assessment consultancy	350 000				350 000	200 000	150 000	-	-	350 000	1	
	2302	Chiloango - professional fees and associated costs		185 000			185 000	37 000	54 000	47 000	47 000	185 000	23	
	2303	Barra do Dande - professional fees and associated costs		155 000			155 000	31 000	52 000	36 000	36 000	155 000	24	
	2304	Longa - professional fees and associated costs		175 000			175 000	30 000	55 000	45 000	45 000	175 000	25	
	2305	Bero - professional fees and associated costs		175 000			175 000	30 000	55 000	45 000	45 000	175 000	26	
	2306	Communications company			60 000		60 000	-	20 000	30 000	10 000	60 000	42	
	2307	Audio Visual and Print Production Costs Outcome 3			30 000		30 000	-	-	15 000	15 000	30 000	41	
	2308	Audio Visual and Print Production Costs Outcome 4			100 926		100 926	20 000	32 926	30 000	28 000	100 926	43	
							-					-		
	2399	Sub-total	350 000	690 000	210 926	-	1 252 926	348 000	418 926	253 000	233 000	1 252 926		
2999	Component total		350 000	750 000	210 926	-	1 312 926	348 000	438 926	273 000	253 000	1 312 926		

30	TRAINING COMPONENT													
	3200	Group training												
	3201	Training on vulnerability assessments	28 000				28 000	-	28 000	-	-	28 000	7	
	3202	Training for extension officers	50 000				50 000	-	25 000	25 000	-	50 000	18	
	3203	Training for EbA		86 000			86 000	8 800	23 600	23 600	30 000	86 000	27	
	3204	Training, workshops and conferences under Outcome 3.			40 000		40 000	-	-	20 000	20 000	40 000	40	
	3205	Training, workshops and conferences under Outcome 4.			60 000		60 000	15 000	15 000	15 000	15 000	60 000	44	
	3299	Sub-total	78 000	86 000	100 000	-	-	264 000	23 800	91 600	83 600	65 000	264 000	
	3300	Meetings/Conferences												
	3301	Presentations for vulnerability assessments	24 000				24 000	-	24 000	-	-	24 000	9	
	3302	Consultations for community response plans	12 000				12 000	-	6 000	6 000	-	12 000	20	
	3303	Community management committee meeting costs		20 000			20 000	5 000	5 000	5 000	5 000	20 000	29	
	3399	Sub-total	36 000	20 000	-	-	56 000	5 000	35 000	11 000	5 000	56 000		
3999	Component total		114 000	106 000	100 000	-	-	320 000	28 800	126 600	94 600	70 000	320 000	
40	EQUIPMENT AND PREMISES COMPONENT													
	4100	Expendable equipment												

	4101	Communication materials for vulnerability assessments	18 000					18 000	-	18 000	-	-	18 000	8
	4102	Printing costs for EWS communication	15 000					15 000	5 000	5 000	5 000	-	15 000	16
	4103	Office rental				96 000		96 000	24 000	24 000	24 000	24 000	96 000	51
	4104	Office equipment				30 000		30 000	20 000	10 000	-	-	30 000	53
	4105	Telecommunications cost	10 000	12 000		26 000		48 000	12 000	12 000	12 000	12 000	48 000	50
	4199	Sub-total	43 000	-	-	248 000	-	303 000	85 000	93 000	65 000	60 000	303 000	
	4200	Non-expendable equipment												
	4201	Climate and hydrological monitoring equipment	630 000					630 000	630 000	-	-	-	630 000	14
	4202	Climate and hydrological monitoring transmission equipment	107 000					107 000	-	107 000	-	-	107 000	17
	4203	Chiloango -equipment and EbA inputs		530 000				530 000	106 000	212 000	106 000	106 000	530 000	23
	4204	Barra do Dande - equipment and EbA inputs		280 000				280 000	56 000	112 000	56 000	56 000	280 000	24
	4205	Longa - equipment and EbA inputs		400 000				400 000	80 000	160 000	80 000	80 000	400 000	25
	4206	Bero - equipment and EbA inputs		400 000				400 000	80 000	160 000	80 000	80 000	400 000	26
	4207	Management plan inputs		80 800				80 800	20 200	20 200	20 200	20 200	80 800	30
	4208	Project vehicle		50 000				50 000	12 500	12 500	12 500	12 500	50 000	33
	4299	Sub-total	737 000	1 740 800	-	-	-	2 477 800	984 700	783 700	354 700	354 700	2 477 800	
4999	Component total		780 000	1 760 800	-	248 000	-	2 780 800	1 069 700	876 700	419 700	414 700	2 780 800	
50	MISCELLANEOUS COMPONENT													
	5100	Operation and maintenance of equipment												
	5101	Vehicle maintenance		20 000				20 000	5 000	5 000	5 000	5 000	20 000	35

	5199	Sub-total	-	20 000	-	-	-	20 000	5 000	5 000	5 000	5 000	20 000	
	5200	Reporting costs												
	5201	Project Steering Committee Meetings					8 000	8 000	2 000	2 000	2 000	2 000	8 000	
	5202	Inception and closure workshop					7 000	7 000	3 500	-	-	3 500	7 000	
								-					-	
	5299	Sub-total	-	-	-	-	15 000	15 000	5 500	2 000	2 000	5 500	15 000	
	5300	Sundry												
	5301	Miscellaneous	1000	1000				2 000	500	500	500	500	2 000	52
	5302	UNDP Cost Recovery Charges				62 000		40 000	10 000	10 000	10 000	10 000	40 000	
	5399	Sub-total	-	-	-	64 000	-	42 000	10 500	10 500	10 500	10 500	42 000	
	5400	Hospitality and entertainment												
	5401							-					-	
	5499	Sub-total	-	-	-	-	-	-	-	-	-	-	-	
	5500	Evaluation												
	5501	Baseline evaluation					35 000	35 000	35 000	-	-	-	35 000	
	5502	Mid-term evaluation					35 000	35 000	-	35 000	-	-	35 000	
	5503	Final evaluation					35 000	35 000	-	-	-	35 000	35 000	
	5504	Audit					20 000	20 000	5 000	5 000	5 000	5 000	20 000	
	5599	Sub-total	-	-	-	-	125 000	125 000	40 000	40 000	5 000	40 000	125 000	
599	9	Component total	1000	21 000	-	62 000	140 000	202 000	61 000	57 500	22 500	61 000	202 000	
99		GRAND TOTAL	1461000	3 093 000	978 000	510 000	140 000	6 180 000	1 947 550	1 942 140	1 170 481	1 119 829	6 180 000	

#	Description	Activities and Notes
Component 1		
1	Vulnerability assessment consultancy	<p><u>This consultancy will:</u></p> <p>1.1.1. Undertake a vulnerability assessment on coastal climate change. This assessment will include: i) desktop analysis of existing climate and vulnerability data; and ii) GIS-based analysis; iii) participatory analysis. \$150 000</p> <p>1.1.2. Develop related sector-specific vulnerability assessments, with input from national industry experts and best-practice adaptation recommendations tailored to each sector. \$150 000</p> <p>1.1.3. Coordinate and conduct vulnerability assessment training (excluding venue and catering costs) \$30 000</p> <p>1.1.4. Oversee the dissemination of the results of the coastal zone and sector-specific vulnerability assessments (including working with site developers to produce interactive vulnerability maps) \$20 000</p> <p>This lump sum will include all data acquisition costs, travel or other costs incurred.</p>
2	National Industry Expert - Agriculture	1.1.2. This consultant will be an expert on climate change impacts to the agriculture sector and will provide sector-specific information to the agriculture sector vulnerability assessment. 15 days @ \$400/day = \$6 000.
3	National Industry Expert - Fisheries	1.1.2. This consultant will be an expert on climate change impacts to the fisheries sector and will provide sector-specific information to the fisheries sector vulnerability assessment. 15 days @ \$400/day = \$6 000.
4	National Industry Expert - Transport	1.1.2. This consultant will be an expert on climate change impacts to the transport sector and will provide sector-specific information to the transport sector vulnerability assessment. 15 days @ \$400/day = \$6 000.
5	National Industry Expert - Environment	1.1.2. This consultant will be an expert on climate change impacts to the environmental sector and will provide sector-specific information to the environmental sector vulnerability assessment. 15 days @ \$400/day = \$6 000.
6	National Industry Expert - Tourism	1.1.2. This consultant will be an expert on climate change impacts to the tourism sector and will provide sector-specific information to the tourism sector vulnerability assessment. 15 days @ \$400/day = \$6 000.
7	Training on vulnerability assessments	<p>1.1.3. Training of 1-3 relevant representatives (at least 15 representatives in total per training event) from INAMET, MINAMB, CCC, Sectoral ministries and Civil Protection on climate change and vulnerability assessments. Each training session will span 2-3 days. @ \$7000 per training including travel assistance, breakfast and lunch x 4 training sessions. This training sessions will be held in Luanda.</p> <p>The training sessions will include a session on vulnerable groups – including notably women. 10% of this training budget will be allocated to this session.</p>

8	Communication materials for vulnerability assessments	1.1.4 Dissemination of the results of the vulnerability assessments. Rollup posters: \$300 per poster x 20 (2 for each sectoral ministry, INAMET, Civil Protection and CCC) = \$6 000 Development of integrated vulnerability map: \$12 000 for web development fees.
9	Presentations for vulnerability assessments	1.1.4 Presentations to publicise the results of the vulnerability assessments. 6 presentations @ \$4000 per event = \$24 000. There will be 1 general presentation/workshop to showcase the results of the vulnerability assessment to a broad range of stakeholders, and 5 sector-specific presentations/workshops (for the agriculture, fisheries, transport, environment and tourism sectors).
10	International meteorological/ EWS specialist	This consultant will conduct an equipment assessment, identify and assess sites for the installation of equipment and procure, install and test equipment. He/she will help to set up the technical aspects of an appropriate communication system to transmit meteorological and hydrological information to INAMET, and transfer flood and drought early warnings from INAMET Forecasting Centre to relevant local authorities. Finally, this consultant will prepare training material for agro-met service providers and extensions officers from SNPC on interpretation of climate information and translation into locally relevant climate forecasts and advisories. 1.2.1 10 days in total. (10 DSA@ DSA \$250/day, 1 flight @\$2500) 1.2.2. 10 days in total. (10 DSA@ DSA \$250/day) 1.2.3 20 days in total. (20 SA@ DSA \$250/day) 1.2.4. 20 days in total. (20 SA@ DSA \$250/day, 1 flight @\$2500) 1.2.5. 20 days in total (80 days total @ \$550/day; 60 days in-country @ DSA \$250/day; 2 flights @ \$2 500 /flight).
11	INAMET technician	This technician will be an employee of INAMET and will assist the International meteorological/ EWS specialist to identify sites for the installation of weather stations and hydrological equipment. 10 days @ \$300/day
12	National Project Manager	National Project Manager (@ \$4500 per month) costs under Outcome 1.
13	Travel to EWS sites	Travel costs for project team to visit the and assess the EWS equipment installation sites. \$600 per visit x 5 visits.
14	Climate and hydrological monitoring equipment	• Install and test 5 Automatic Weather Stations (AWS) and at least 5 rainfall gauges complete with remote data transmission and archiving with display systems at the identified installation sites; Procure 1 spare Automatic Weather Stations (AWS) and 2 spare rainfall gauges complete with remote data transmission and archiving with display systems; Procure and operationalise 1 mobile AWS for sensor's field calibration; integrating existing AWS and interfacing to INAMET central data collection and storage system; Install and test 4 automatic river gauging stations and 4 manual water level stations at the identified installation sites, complete with remote data transmission and archiving with display systems at INAMET, Civil Protection; Procure 1 spare automatic river gauging stations and 1 spare manual water level stations; Procure and

		<p>operationalise 1 mobile Hydromet Automatic Station (HAS) for sensor's field calibration. \$570 000.</p> <ul style="list-style-type: none"> • Installation and construction costs for 5 AWS, 5 rainfall gauges, 4 automatic river gauging stations and 4 manual water level stations. \$50 000. • Install and test 4 automatic river gauging stations and at least 4 manual water level (at the X and X rivers) stations, complete with remote data transmission and archiving with display systems at INAMET, Civil Protection, Provincial Government and relevant municipal and communal administrations. • 5 VHF-U systems and/or Advanced powerful Walky Talky systems (50km range or plus via retransmitters) using open UHF radio frequencies for data transfer from AWS. @\$5 000 each = \$25 000. • Stabilise power at 5 AWSs through the provision of dry cells, upgrading solar panels, and batteries. @\$5 000 each = \$25 000.
15	Finance Manager	The Finance manager will oversee the procurement of all of the climate and hydrological monitoring equipment. Finance Manager (@ \$4500 per month) costs under Outcome 1.
16	Printing costs for EWS communication	Editing, printing and publishing protocols, handbooks, policy and information briefs, and/or guidelines
17	Climate and hydrological monitoring transmission equipment	<ul style="list-style-type: none"> • Telecommunications infrastructure including computers, computer servers and software, radiotelephones, portable telephones, GSM/GPRS GSM/GPRS modems and other equipment for internet access. \$72 000 • Communication Facility Radio Transceiver and supporting two way radios. \$25 000. • Procure equipment (hardware and software) and ensure connectivity (internet modems and access) for 4 modern forecasting workstations to support INAMET at project intervention site. @\$3 000 each = \$12 000
18	Training for extension officers and agro-meteorological services	1.2.5. Facilitate in-service capacity programme for at least 15 decentralized agro-met service providers, extension officers from SNPC and other relevant local government representatives at the selected project intervention site to be trained on interpreting climate information and translating it into locally relevant climate forecasts and advisories. These trainees will function as managers of the Flood Forecasting and Early Warning issuing, dissemination and response actions. 2 sets of in-service training @\$25 000 each.
19	National EWS consultant	1.2.6. The consultant will develop flood and drought early warning response plans with pilot communities in the selected project intervention sites. This lump sum will include all material costs, travel or other costs incurred.
20	Consultations for community response plans	1.2.6. 4 x training/consultation sessions with community @ \$3000 per session, including, venue, breakfast and lunch. These training/consultations will be held at the project site, and will be used to develop flood community response plans, in consultation with local government officials and community management structures. This total cost also includes budget for transporting participants to the venue if necessary.
Component 2		

21	International EbA/ agriculture specialist	<p><u>This consultant will:</u></p> <p>2.1.1 Undertake a biophysical, socio-economic and market assessments at each project site. Total cost \$10 073</p> <p>2.1.2 Identify species for EbA interventions. Total cost \$10 073</p> <p>2.1.3. Develop protocols to guide implementation of EbA interventions. Total cost \$10 073 40 days in total</p> <p>2.1.4. Support the National Project Manager to identify and contract organisations to implement interventions at each of the 4 pilot sites. Total cost = \$3 825</p> <p>2.2.1. Identify the appropriate climate-resilient agriculture techniques to be implemented in each site. 16 days in total = \$12 873</p> <p>2.1.8. Collaborate with the Community Engagement Expert and community management committees to develop community-based EbA intervention management plans. 28 days in total = \$21 473</p> <p>2.4.3. Collaborate with the Community engagement specialist and contractors to collate lessons learned and best practices at the end of the process. 7 days in total = \$3 850</p> <p>2.4.4. and 2.4.5 Develop EbA project concept notes for private sector upscaling of EbA interventions in collaboration with the Community Engagement Expert and the TA. 8 days in total = \$4 400</p> <p>Total travel costs are included in the above figures. (104 days @ \$550/day; 52 days in-country @ DSA \$250 day; 2 international flights @ \$2 500 /flight, local flights - Cabinda \$320 x 2 and Namibe \$400 x 2)</p> <p>DSA depends on the site of the EW intervention. Have selected Cabinda DSA as a guideline: http://apps.who.int/bfi/tsy/PerDiem.asp</p>
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22	Community Engagement specialist	<p><u>This consultant will:</u></p> <p>2.1.5. Collaborate with contractors to establish community management committees in pilot communities. 30 days in total = \$12 000</p> <p>2.1.6. Liaise with the community management committees and EbA expert to identify pilot sites for EbA interventions. 20 days in total days in total = \$8 000</p> <p>2.1.8. Collaborate with EbA expert and community management committees to develop community-based EbA intervention management plans. 30 days in total = \$12 000</p> <p>2.4.3. Collaborate with EbA expert and contractors to collate lessons learned and best practices at the end of the process. 5 days in total = \$2 000</p> <p>2.4.4. Develop EbA project concept notes for private sector upscaling of EbA interventions in collaboration with the International EbA/ agriculture specialist and the TA. 5 days in total = \$2 000</p> <p>Total travel costs = \$2880 (split over 2.1.5, 2.1.6, 2.1.8 = \$960 each)</p> <p>90 days @ \$400/day; local flights - Cabinda \$320 x 4 and Namibe \$400 x 4</p>
23	Consultancy sub-contracts for land restoration and climate-resilient land restoration in Chiloango (Cabinda)	<p>2.1.7. Implement appropriate EbA interventions. Professional fees and associated costs = \$150 000 and Equipment and EbA inputs = \$450 000</p> <p>Interventions under 2.1.7 will include <i>inter alia</i>:</p> <p>Conduct an Environmental Impact Assessment, if required, for the proposed EbA and climate-resilient land restoration activities in Chiloango (\$20,000).</p> <ul style="list-style-type: none"> • Establish a community-lead nursery for climate-resilient plant species identified in Activity 2.1.2. • Restore 400 ha of degraded wetlands using labour from local communities. • Assess the wetland ecosystem and create a cost effective strategy for its restoration in consultation with the community management committee. • Restore the wetland using workers from local communities. Activities will include inter alia: i) digging of new water channels; ii) clearing of existing water channels; and iii) planting with climate-resilient species to stabilise banks. <p>2.2.2. Establish demonstration plots at each project intervention site to demonstrate climate-resilient agricultural techniques. Professional fees and associated costs = \$10 000 and Equipment and EbA inputs = \$20 000</p> <p>2.2.3. Implement a range of climate-resilient land management interventions identified in Activity 2.3.1 within and around pilot communities. Professional fees and associated costs = \$25 000 and Equipment and EbA inputs = \$60 000</p> <p>2.4.3. Collaborate with the Community engagement specialist and contractors to collate lessons learned and best practices at the end of the process.</p>

		<p>Professional fees and associated costs include: restoration design, management and administration.</p> <p>Equipment and EbA inputs include: procurement and payment for goods and services including planting equipment and uniforms; wages for community labour; and hard costs of establishing nurseries and demonstration plots.</p>
24	Consultancy sub-contracts for land restoration and climate-resilient land restoration in Barra do Dande (Kwanza Sul)	<p>2.1.8. Implement appropriate EbA interventions. Professional fees and associated costs = \$100 000 and Equipment and EbA inputs = \$150 000 Interventions under 2.1.7 will include <i>inter alia</i>:</p> <p>Conduct an Environmental Impact Assessment, if required, for the proposed EbA and climate-resilient land restoration activities in Barra (\$20,000).</p> <ul style="list-style-type: none"> • Establish a community-lead nursery for climate-resilient plant species identified in Activity 2.1.2. • Restore 10 ha of degraded wetlands in Barra do Dande using labour from local communities. <p>2.2.2. Establish demonstration plots at each project intervention site to demonstrate climate-resilient agricultural techniques. Professional fees and associated costs = \$10 000 and Equipment and EbA inputs = \$20 000</p> <p>2.2.3. Implement a range of climate-resilient land management interventions identified in Activity 2.3.1 within and around pilot communities. Professional fees and associated costs = \$25 000 and Equipment and EbA inputs = \$60 000</p> <p>2.4.3. Collaborate with the Community engagement specialist and contractors to collate lessons learned and best practices at the end of the process.</p> <p>Professional fees and associated costs include: restoration design, management and administration.</p> <p>Equipment and EbA inputs include: procurement and payment for goods and services including planting equipment and uniforms; wages for community labour; and hard costs of establishing nurseries and demonstration plots.</p>
25	Consultancy sub-contracts for land restoration and climate-resilient land restoration in Longa (Kwanza Sul)	<p>2.1.9. Implement appropriate EbA interventions. Professional fees and associated costs = \$125 000 and Equipment and EbA inputs = \$300 000 Interventions under 2.1.7 will include <i>inter alia</i>:</p> <p>Conduct an Environmental Impact Assessment, if required, for the proposed EbA and climate-resilient land restoration activities in Longa (\$20,000).</p> <ul style="list-style-type: none"> • Establish a community-led nursery for climate-resilient plant species identified in Activity 2.1.2. • Restore 41 ha of degraded wetland in Longa using labour from local and nearby communities. • Assess the wetland ecosystem and create a cost effective strategy for its restoration in consultation with

		<p>the community management committee.</p> <ul style="list-style-type: none"> • Restore the wetland and riverine area using workers from local communities. Activities will include inter alia: i) digging of new water channels; ii) clearing of existing water channels; and iii) planting with climate-resilient species to stabilise river banks. <p>2.2.2. Establish demonstration plots at each project intervention site to demonstrate climate-resilient agricultural techniques. Professional fees and associated costs = \$10 000 and Equipment and EbA inputs = \$20 000</p> <p>2.2.3. Implement a range of climate-resilient land management interventions identified in Activity 2.3.1 within and around pilot communities. Professional fees and associated costs = \$45 000 and Equipment and EbA inputs = \$110 000</p> <p>2.4.3. Collaborate with the Community engagement specialist and contractors to collate lessons learned and best practices at the end of the process.</p> <p><u>Professional fees and associated costs include:</u> restoration design, management and administration.</p> <p><u>Equipment and EbA inputs include:</u> procurement and payment for goods and services including planting equipment and uniforms; wages for community labour; and hard costs of establishing nurseries and demonstration plots.</p>
26	Consultancy sub-contracts for land restoration and climate-resilient land management in Bero (Namibe)	<p>2.1.10. Implement appropriate EbA interventions. Professional fees and associated costs = \$125 000 and Equipment and EbA inputs = \$300 000</p> <p>Interventions under 2.1.7 will include <i>inter alia</i>:</p> <p>Conduct an Environmental Impact Assessment, if required, for the proposed EbA and climate-resilient land restoration activities in Bero (\$20,000).</p> <ul style="list-style-type: none"> • Assess the estuary, wetland and river ecosystem and create a cost effective strategy for its restoration in consultation with the community management committee. • Restore 110ha of wetland (including riverine) areas using workers from local communities. Activities will include inter alia: i) digging of new water channels; ii) clearing of existing water channels; and iii) planting with climate-resilient species to stabilise river banks. • Restore estuarine areas using workers from local communities. Activities will include inter alia digging of new water channels, clearing of silt and sediment, removal of litter and detritus. <p>2.2.2. Establish demonstration plots at each project intervention site to demonstrate climate-resilient agricultural techniques. Professional fees and associated costs = \$10 000 and Equipment and EbA inputs = \$20 000</p> <p>2.2.3. Implement a range of climate-resilient land management interventions identified in Activity 2.3.1 within and around pilot communities. Professional fees and associated costs = \$40 000 and Equipment and EbA inputs = \$80 000</p> <p>2.4.3. Collaborate with the Community engagement specialist and contractors to collate lessons learned</p>

		<p>and best practices at the end of the process.</p> <p><u>Professional fees and associated costs include:</u> restoration design, management and administration.</p> <p><u>Equipment and EbA inputs include:</u> procurement and payment for goods and services including planting equipment and uniforms; wages for community labour; and hard costs of establishing nurseries and demonstration plots.</p>
27	Training for EbA	<p>2.3.1. Development of training programmes and related materials for 2.3.2, 2.3.3 and 2.3.4 : 30 days in total x \$300 p/d = total cost \$9 000</p> <p>2.3.2. 4 x training for local government representatives on EbA and climate-resilient land management: 4 x (1 training day @ 600 (2 trainers) + 3000 for local venue and catering) = total cost \$14 400</p> <p>2.3.3. 4 x training for community management committees on EbA and climate-resilient land management: 4 x (1 training day @ 600 (2 trainers) + 3000 for local venue and catering) = total cost \$14 400</p> <p>2.3.4. 4 x training for community management committees on EWS: 4 x (1 training day @ 600 (2 trainers) + 3000 for local venue and catering) = total cost \$14 400</p> <p>2.3.5. 4 x training for community management committees on maintenance of EbA and climate-resilient land management: 4 x (1 training day @ 600 (2 trainers) + 3000 for local venue and catering) = total cost \$14 400</p> <p>2.3.6 4 x experience sharing events: 4x (500 for transport costs, 600 for facilitators/ trainers (2 trainers), 500 for educational material printing) = total cost \$6400</p> <p>Production of detailed training reports, with recommendations, for all trainings - total cost \$5 000</p> <p>Where no local venue is available, a gazebo should be rented to accommodate the trainees. Where trainees require transport to a central location for training, budget for this should be taken out of the venue fee and a venue chosen accordingly.</p> <p>Lump sum for transport (should cover 4 trips or 2 trainers to all project sites to conduct training) = total cost \$8000</p> <p>The project will ensure that at least 30% of people trained on EbA and climate-resilient land management are women. Therefore 30% of this budget is allocated towards the training of women specifically.</p>
28	National Project Manager	National Project Manager (@ \$4500 per month) costs under Outcome 2. The PM role will include recruitment of consultancies to manage EbA and climate-resilient land management.
29	Community management committee meeting costs	An allowance to be used as needed for transport of community members, token venue hire (small meeting would ideally be hosted in someone's home or a free local venue), stationary/printing costs, and catering.

		4 meetings per year @ \$1000 per meeting x 4 years = \$20 000
30	Management plan inputs	This is an annual stipend for carrying out activities identified in the community management plan. These interventions are likely to include inter alia: - Facilitated market access for NTFPs from EbA interventions and crops produced from climate-resilient agriculture = \$52 000 - \$150 p/m for each community management committee for patrols of restored land = \$7 200 x 4 years = \$28800
31	Monitoring and learning specialist	The monitoring and learning specialist will be responsible for offering technical advice and support to the project unit, local and international consultants. 60 days @ \$550/day; days per year = \$33 000 x 4 years = \$132 000 24 days in-country @ DSA \$250 = \$6 000 6 international flights @ \$2 500 /flight = \$15 000
32	National academics	Contract for national academic team to visit project sites twice annually in year 2, 3 and 4 and document the progress of EbA and climate-resilient land management interventions. Outputs of this contract will include: i) detailed reports of project progress; and ii) peer reviewed publications related to LDCF interventions across the various areas. Lessons learned from this M&E process will be integrated into 2.4.2. \$20 00 per year over 3 years = \$60 000
33	Project vehicle	Under Component 2 the project vehicle will be used for site visits of TA and PM to Bingo and Kwanza Sulk.
34	Project driver	Under Component 2 the project driver will drive the TA and PM interventions sites in Bingo and Kwanza Sulk, as required. \$1 500 x 12 x 4 years = \$72 000
35	Vehicle maintenance	Under Component 2 the project vehicle will be used for site visits of TA and PM to Bingo and Kwanza Sulk.
36	Travel for EbA	Petrol allowance: 1lt per 10km = \$1 p/l = \$300 per month for travel in Luanda, Dander and Longa x 12 x 4 = 14 400 Flights to Namibia \$400 return economy class x 6 flights per year = 9 600 Flights to Cabinda \$320 return economy class x 6 flights per year = 7 680

37	International Technical Advisor	<p>Cost for an International Technical Advisor under Outcome 3. International Technical Advisor (total annual salary of \$235 537 x 2 years).</p> <p>The International Technical Advisor be an expert on adaptation and will oversee deliverables of all Components. S/he will also provide additional technical input under Outcome 3.</p> <p>The International Technical Advisor will also provide support to the GEF UNDP project entitled 'Promoting climate-resilient development and enhanced adaptive capacity to withstand disaster risks in Angola's Cuvelai River Basin' (GEF ID: 5166) on a cost-sharing basis.</p> <p>The TA is responsible for the following activities under Outcome 3:</p> <p>2.4.3. Engage with the private sector through relevant forums to disseminate EbA project concept notes.</p> <p>3.1 (all activities). Technical support and training to CIBAC and Climate Change Cabinet.</p> <p>3.2.1. Supervise and assist the National and International Adaptation Economics/Policy Expert to produce and present economic assessments.</p> <p>3.2.3. Supervise and assist the National and International Adaptation Economics/Policy Expert to produce and present policy briefs.</p> <p>3.2.4 Supervise and assist the National and International Adaptation Economics/Policy Expert to produce and present technical guidelines.</p>
38	National Project Manager	National Project Manager (@ \$4500 per month) costs under Outcome 3.
39	National and International Adaptation Economics/Policy Expert	<p>International Adaptation Economics/Policy Expert (\$45 000 x 2 years = \$90 000)</p> <p>National Adaptation Economics/ Policy Expert (\$17 500 x 2 years = \$35 000)</p> <p>The International and National Adaptation and Economics/ Policy Expert will work together closely on the following activities:</p> <p>3.1.5 Provide training to the Secretariat of the CIBAC and Climate Change Cabinet on climate change adaptation finance and climate change adaptation investment appraisal.</p> <p>3.2.1 Undertake and present assessments of the economic impacts of climate change on Angola's coastal zone, disaggregated by sector.</p> <p>3.2.2 Identify entry points at the national and provincial level for the integration of climate change adaptation interventions, including EbA, into relevant policies and sectoral budgets and propose policy revisions.</p> <p>3.2.3 Develop a coastal zone adaptation plan and mainstream the plan into relevant sectoral, regional and national development plans.</p> <p>3.2.4 Develop technical guidelines for GAC, sectoral ministries and the CIBAC on how to assess, plan and</p>

		finance climate change adaptation interventions.
40	Training, workshops and conferences under Outcome 3.	<p>Training and workshops under Outcome 3.</p> <p>3.1.5. 6 x training workshops @ \$5000 per workshop for the secretariat of the CIBAC, technical staff of member ministries, and the GCA.</p> <p>3.2.1. 5 x workshop to present economic assessments and related policy briefs @ \$5000 per workshop, including travel assistance, breakfast and lunch. The workshop could also relate to any of the other relevant content produced under Output 3.2.</p>
41	Audio Visual and Print Production Costs Outcome 3	<p>3.2.3 Costs for printing and disseminating policy briefs produced under @ \$15 000.</p> <p>3.2.4 Costs for printing and disseminating technical guidelines produced @ \$15 000.</p> <p>Printing budget could also be used to cover any of the other relevant content produced under Output 3.2.</p>
42	Communications Company	<p>Communications company @ \$375 x 160 days</p> <p>4.1.1. Design and implement awareness-raising campaigns in partnership with the TA. This will include inter alia: liaising with print and television media, conceptualising a short film, designing electronic and print materials.</p> <p>4.1.2. Disseminate lessons learned and knowledge generated through the project through appropriate national and regional networks, such as Africa Adaptation Knowledge Network.</p> <p>The awareness-raising campaign will specifically target women to ensure that at least 50% of the people reached are female. Therefore 50% of this budget is allocated towards promoting gender equity.</p>
43	Audio Visual and Print Production Costs Outcome 4	<p>4.1.1 and 4.1.2 Printing of materials (such as posters, summaries of lessons learned): \$10 426</p> <p>Production and dissemination of short video clip: \$63 000</p> <p>Layout, translation and formatting of communication materials: \$15 000</p> <p>Multi-media such as talk shows, TV and Radio spots, billboards on the national road and other means of raising awareness: \$24 500</p> <p>Dissemination of knowledge through online platforms such as AAKNET and Adaptation Learning Mechanism: \$10 000</p>
44	Training, workshops and conferences under Outcome 4.	<p>4.1.1 Conferences and meetings for awareness-raising activities. Talks: venue, speaker, catering: \$5000 x 10 per year.</p> <p>4.1.3 Conferences and workshops at academic institutions. 10 seminars from national consultants at local academic institutions @ \$1000 per seminar.</p>

45	International Technical Advisor	<p>Cost for an International Technical Advisor under Outcome 4. International Technical Advisor (total annual salary of \$235 537 x 2 years)</p> <p>The International Technical Advisor be an expert on adaptation and will oversee deliverables of all Components. S/he will also provide additional technical input under Outcome 4.</p> <p>The International Technical Advisor will also provide support to the GEF UNDP project entitled 'Promoting climate-resilient development and enhanced adaptive capacity to withstand disaster risks in Angola's Cuvelai River Basin' (GEF ID: 5166) on a cost-sharing basis.</p> <p>The TA is responsible for the following activities under Outcome 4:</p> <p>4.1.1 Meet with NGOs, relevant private sector stakeholders, academic institutions and the general public at project intervention sites to engage with them on: i) climate change impacts on the coastal zone; ii) potential climate change adaptation interventions; and iii) the benefits of EbA for increasing the resilience of livelihoods and communities to climate change.</p> <p>4.1.2 Disseminate lessons learned and knowledge generated through the project through appropriate national and regional networks, such as Africa Adaptation Knowledge Network and support the development of an e-library.</p> <p>4.1.3 Arrange for relevant national consultants hired through the project to present the findings of their assessments or studies at local academic institutions.</p>
46	Travel for TA	<p>Travel budget for the TA to visit project sites and meet with relevant private sector stakeholders, academic institutions and general public to increase awareness of climate change among these non-governmental stakeholders. This travel will also allow the TA to provide technical oversight on the implementation of project activities under Component 2.</p> <p>Travel in Luanda, Dande and Longa = \$2000 per year x 4 = \$8 000</p> <p>Flights to Namibe \$400 return economy class x 4 flights per year = \$6 400</p> <p>Flights to Cabinda \$350 return economy class x 4 flights per year = \$5 600</p>
47	National Project Manager	National Project Manager (@\$4500 per month) costs under Outcome 4.
48	Finance Manager	Finance Manager \$3 500 p/m x 12 = \$42 000 x 4 years **One year of the Finance Manager salary is included under Component 1**
49	Project Assistant	Project Assistant \$1 500 p/m x 12 = \$18 000 x 4 years
50	Telecommunications cost	Telecommunications cost including telephone and internet. \$1 000 p/m x 12 = \$12 000 x 4 years
51	Office rental	Office rental \$2 000 p/m (inclusive) x 12 = \$24 000 x 4 years
52	Miscellaneous	Miscellaneous costs. \$550 per year x 4 years.
53	Office equipment	Office equipment. Including, desks, chairs, computers, office supplies. \$30 000 over the duration of the project

54	UNDP Cost Recovery Charges	<p>UNDP Cost Recovery charges. Estimated @10 000 per year x 4 years. Includes: I) Staff selection and recruitment; ii) Staff HR & Benefits Administration & Management;; iii) Consultant recruitment; iv) Payment process associated with consultants; v) Low value procurement; and vi) High value procurement and disposal of equipment.</p> <p>Recruitment and Contracting of personnel: Selection and recruitment process - 3 x \$674 = \$2,022 F10 settlement - \$32.45 x 5 F10/staff/year = \$1,947</p> <p>Processing direct payments: Payment process - \$36.39 x 5 direct payment requests x 198 weeks = \$36,026</p>
55	Professional service - Audit fees	Fees for annual financial audits (USD 3,000 per year)